COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Permit No.	**VA0000248**
Effective Date:	June 10, 2010
Expiration Date:	June 9, 2015

AUTHORIZATION TO DISCHARGE UNDER THE

VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM

AND

THE VIRGINIA STATE WATER CONTROL LAW

In compliance with the provisions of the Clean Water Act as amended and pursuant to the State Water Control Law and regulations adopted pursuant thereto, the following owner is authorized to discharge in accordance with the information submitted with the permit application, and with this permit cover page, Part I – Effluent Limitations and Monitoring Requirements, and Part II – Conditions Applicable to All VPDES Permits, as set forth herein.

Owner Name:	US Army and Alliant Techsystems Inc.
Facility Name:	Radford Army Ammunition Plant
City:	NA
County:	Montgomery and Pulaski Counties
Facility Location:	Peppers Ferry Road (Route 114), Radford, Virginia

The owner is authorized to discharge to the following receiving stream:

Stream Name:	New River
River Basin:	New River
River Subbasin:	NA
Section:	2a
Class:	IV
Special Standards:	PWS, v

Steven A. Dietrich, P.E., Regional Director
Blue Ridge Regional Office

8th June 2010
Date

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - STORM EVENT MONITORING

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall serial number 004.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Minimum	Maximum	Frequency	Sample Type
Flow (MG)	NA	NL	1/6 months	Estimate *
pH (SU)	6.0	9.0	1/6 months	Grab **
Nitrate/Nitrite as N (mg/l)	NA	NL	1/6 months	Grab **
Sulfate (mg/l)	NA	NL	1/6 months	Grab **

NL - No limitation, monitoring only
NA - Not applicable

2. *Estimate of the total volume of the discharge during the storm event should be reported as flow. **A minimum of one grab sample is required. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event interval may also be waived where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the permittee shall submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable.

3. There shall be no discharge of floating solids or visible foam in other than trace amounts.

4. See Part I.B.3 for quantification levels and reporting requirements.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - STORM EVENT MONITORING

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall serial number 401.

Such discharges of treated coal pile runoff shall be limited and monitored at outfall 401 by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Minimum	Maximum	Frequency	Sample Type
Flow (MG)	NA	NL	1/6 months	Estimate *
pH (SU)	6.0	9.0	1/6 months	Grab **
Total Suspended Solids[4]	NA	50 mg/l	1/6 months	Grab **

NL - No limitation, monitoring only
NA - Not applicable

2. *Estimate of the total volume of the discharge during the storm event should be reported as flow. **A minimum of one grab sample is required. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event interval may also be waived where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the permittee shall submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable.

3. There shall be no discharge of floating solids or visible foam in other than trace amounts.

4. Any untreated overflow from facilities designed, constructed and operated to treat the volume of coal pile runoff which is associated with a 10 year, 24 hour rainfall event shall not be subject to the 50 mg/l limitation for total suspended solids.

5. See Part I.B.3 for quantification levels and reporting requirements.

A. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Radford Army Ammunition Plant

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall serial number 402.

Such discharges of non-storm water shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATION				MONITORING REQUIREMENTS	
	Monthly Average	Weekly Average	Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	NL	NA	NA	NL	1/month	Estimate
pH (SU)	NA	NA	6.0	9.0	1/month	Grab
Oxidized Nitrogen (mg/l)	NL	NA	NA	NL	1/month	Grab
Sulfate (mg/l)	NL	NA	NA	NL	1/month	Grab
Temperature (°C)	NA	NA	NA	NL	1/month	Grab

NL - No limitation, monitoring only
NA - Not applicable

2. There shall be no discharge of floating solids or visible foam in other than trace amounts.

3. See Part I.B.3 for quantification levels and reporting requirements.

A. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS- Radford Army Ammunition Plant

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall serial number 005.

Such discharges of oleum plant wastewater and non contact cooling water shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATION				MONITORING REQUIREMENTS	
	Monthly Average	Weekly Average	Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	NL	NA	NA	NL	Continuous	Recorded
pH (SU)[2]	NA	NA	6.0	9.0	Continuous	Recorded
Biochemical Oxygen Demand, 5 day (mg/l)	NA	NA	NA	NL	1/Week	24 Hour Composite
Sulfate	2100 mg/l 19000 kg/d	NA	NA	3000 mg/l 21000 kg/d	1/Week	24 Hour Composite
Chemical Oxygen Demand (mg/l)	NL	NA	NA	NL	1/Week	24 Hour Composite
Oxidized Nitrogen (mg/l)	NL	NA	NA	NL	1/Week	24 Hour Composite
Total Suspended Solids (mg/l)	NL	NA	NA	NL	1/Month	24 Hour Composite
Temperature, intake, °C	NA	NA	NA	NL	Continuous	Recorded
Temperature, °C	NA	NA	NA	NL	Continuous	Recorded
Heat rejected, BTU/day	NA	NA	NA	518×10^6	1/Day	Calculated

NL - No limitation, monitoring only; NA - Not applicable;

2. The discharge shall have a pH value between 6.0 and 9.0 at all times, except as noted in Part I.B.12, and shall be monitored continuously.

3. There shall be no discharge of floating solids or visible foam in other than trace amounts.

4. See Part I.B.3 for quantification levels and reporting requirements.

A. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Radford Army Ammunition Plant

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall serial number 006.

Such discharges of non-contact cooling water and raw water overflow shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATION				MONITORING REQUIREMENTS	
	Monthly Average	Weekly Average	Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	NL	NA	NA	NL	Continuous	Recorded
pH (SU)[2]	NA	NA	6.0	9.0	Continuous	Recorded
Biochemical Oxygen Demand, 5 day (mg/l)	NA	NA	NA	NL	1/Month	24 Hour Composite
Chemical Oxygen Demand (mg/l)	NA	NA	NA	NL	1/Month	24 Hour Composite
Oxidized Nitrogen (mg/l)	NA	NA	NA	NL	1/Month	24 Hour Composite
Sulfate (mg/l)	NA	NA	NA	NL	1/Month	24 Hour Composite
Temperature, °C	NA	NA	NA	NL	Continuous	Recorded
Heat rejected, BTU/day	NA	NA	NA	5208×10^6	1/Day	Calculated
Acute Whole Effluent Toxicity[5]	NA	NA	NA	1.0 TUa	1/3 Months	24 Hour Composite

NL - No limitation, monitoring only
NA - Not applicable

2. The discharge shall have a pH value between 6.0 and 9.0 at all times, except as noted in Part I.B.12, and shall be monitored continuously.

3. There shall be no discharge of floating solids or visible foam in other than trace amounts.

4. See Part I.B.3 for quantification levels and reporting requirements.

5. See Part I.C, and Part I.D for additional TMP monitoring requirements.

A. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Radford Army Ammunition Plant

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall serial number 007.

Such discharges of nitrocellulose and nitric acid manufacturing wastewaters, boiler blowdown, non contact cooling water shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATION										MONITORING REQUIREMENTS	
	Monthly Average				Weekly Average	Minimum	Maximum				Frequency	Sample Type
Flow (MGD)		NL			NA	NA		NL			Continuous	Recorded
pH (SU) [2]		NA			NA	6.0		9.0			Continuous	Recorded
Temperature (May - Oct)		NA			NA	NA		50 °C			Continuous	Recorded
Temperature (Nov. - April)		NA			NA	NA		35 °C			Continuous	Recorded
Biochemical Oxygen Demand, 5 day	24	mg/l	233	kg/d	NA	NA	64	mg/l	621	kg/d	1/Week	24 Hour Composite
Total Suspended Solids	40	mg/l	388	kg/d	NA	NA	80	mg/l	1261	kg/d	1/Week	24 Hour Composite
Sulfate	2100	mg/l	50000	kg/d	NA	NA	3000	mg/l	59000	kg/d	1/Week	24 Hour Composite
Oxidized Nitrogen	NL	mg/l	6000	kg/d	NA	NA	NL	mg/l	10000	kg/d	1/Week	24 Hour Composite
Acute Whole Effluent Toxicity [3]		NA			NA	NA		6.6 TUa			1/3 Months	24 Hour Composite
Chemical Oxygen Demand, mg/l		NA			NA	NA		NL			1/Month	24 Hour Composite
Ammonia, as Nitrogen, mg/l		NA			NA	NA		NL			1/Month	24 Hour Composite
2,4-Dinitrotoluene, mg/l		NA			NA	NA		NL			1/Month	24 Hour Composite
N-nitroso-diphenylamine, mg/l		NA			NA	NA		NL			1/Year	24 Hour Composite
Total Chromium	NA	ug/l	10.76	kg/d	NA	NA	NA	ug/l	26.86	kg/d	1/3 Months	24 Hour Composite
Total Copper	NA	ug/l	14.06	kg/d	NA	NA	NA	ug/l	32.78	kg/d	1/3 Months	24 Hour Composite
Total Lead	NA	ug/l	3.10	kg/d	NA	NA	NA	ug/l	6.69	kg/d	1/3 Months	24 Hour Composite
Total Nickel	NA	ug/l	16.39	kg/d	NA	NA	NA	ug/l	38.60	kg/d	1/3 Months	24 Hour Composite
Total Zinc	NA	ug/l	10.18	kg/d	NA	NA	NA	ug/l	25.31	kg/d	1/3 Months	24 Hour Composite
2-Nitrophenol	NA	ug/l	0.63	kg/d	NA	NA	NA	ug/l	2.24	kg/d	1/Year	Grab
4-Nitrophenol	NA	ug/l	1.57	kg/d	NA	NA	NA	ug/l	5.59	kg/d	1/Year	Grab
1,1-Dichloroethane	NA	ug/l	0.21	kg/d	NA	NA	NA	ug/l	0.57	kg/d	1/Year	Grab
1,2-Dichloroethane	NA	ug/l	1.75	kg/d	NA	NA	NA	ug/l	5.57	kg/d	1/Year	Grab
1,2-trans-Dichloroethylene	NA	ug/l	0.24	kg/d	NA	NA	NA	ug/l	0.64	kg/d	1/Year	Grab
1,1-Dichloroethylene	NA	ug/l	0.21	kg/d	NA	NA	NA	ug/l	0.58	kg/d	1/Year	Grab

A. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Radford Army Ammunition Plant

1. Outfall 007 continued

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATION										MONITORING REQUIREMENTS	
	Monthly Average				Weekly Average	Minimum	Maximum				Frequency	Sample Type
1,2-Dichlorobenzene	NA	ug/l	1.90	kg/d	NA	NA	NA	ug/l	7.70	kg/d	1/Year	Grab
1,3-Dichlorobenzene	NA	ug/l	1.38	kg/d	NA	NA	NA	ug/l	3.69	kg/d	1/Year	Grab
1,4-Dichlorobenzene	NA	ug/l	1.38	kg/d	NA	NA	NA	ug/l	3.69	kg/d	1/Year	Grab
1,2-Dichloropropane	NA	ug/l	1.90	kg/d	NA	NA	NA	ug/l	7.70	kg/d	1/Year	Grab
1,3-Dichloropropylene	NA	ug/l	1.90	kg/d	NA	NA	NA	ug/l	7.70	kg/d	1/Year	Grab
2,4-Dimethylphenol	NA	ug/l	0.18	kg/d	NA	NA	NA	ug/l	0.46	kg/d	1/Year	Grab
2,4-Dinitrophenol	NA	ug/l	11.71	kg/d	NA	NA	NA	ug/l	41.61	kg/d	1/Year	Grab
4,6-Dinitro-o-cresol	NA	ug/l	0.76	kg/d	NA	NA	NA	ug/l	2.69	kg/d	1/Year	Grab
1,1,1-Trichloroethane	NA	ug/l	0.21	kg/d	NA	NA	NA	ug/l	0.57	kg/d	1/Year	Grab
1,1,2-Trichloroethane	NA	ug/l	0.31	kg/d	NA	NA	NA	ug/l	1.23	kg/d	1/Year	Grab
1,2,4-Trichlorobenzene	NA	ug/l	1.90	kg/d	NA	NA	NA	ug/l	7.70	kg/d	1/Year	Grab
Acenaphthene	NA	ug/l	0.18	kg/d	NA	NA	NA	ug/l	0.46	kg/d	1/Year	Grab
Acenaphthylene	NA	ug/l	0.18	kg/d	NA	NA	NA	ug/l	0.46	kg/d	1/Year	Grab
Acrylonitrile	NA	ug/l	0.91	kg/d	NA	NA	NA	ug/l	1.72	kg/d	1/Year	Grab
Anthracene	NA	ug/l	0.18	kg/d	NA	NA	NA	ug/l	0.46	kg/d	1/Year	Grab
Benzene	NA	ug/l	0.55	kg/d	NA	NA	NA	ug/l	1.30	kg/d	1/Year	Grab
Benzo(a)anthracene	NA	ug/l	NL	kg/d	NA	NA	NA	ug/l	NL	kg/d	1/Year	Grab
3,4-Benzofluoranthene	NA	ug/l	0.19	kg/d	NA	NA	NA	ug/l	0.47	kg/d	1/Year	Grab
Benzo(a)pyrene	NA	ug/l	NL	kg/d	NA	NA	NA	ug/l	NL	kg/d	1/Year	Grab
Benzo(k)fluoranthene	NA	ug/l	NL	kg/d	NA	NA	NA	ug/l	NL	kg/d	1/Year	Grab
Bis(2-ethylhexyl)phthalate	NA	ug/l	0.92	kg/d	NA	NA	NA	ug/l	2.50	kg/d	1/Year	Grab
Carbon tetrachloride	NA	ug/l	1.38	kg/d	NA	NA	NA	ug/l	3.69	kg/d	1/Year	Grab
Chlorobenzene	NA	ug/l	1.38	kg/d	NA	NA	NA	ug/l	3.69	kg/d	1/Year	Grab
Chloroethane	NA	ug/l	1.07	kg/d	NA	NA	NA	ug/l	2.86	kg/d	1/Year	Grab
Chloroform	NA	ug/l	1.08	kg/d	NA	NA	NA	ug/l	3.15	kg/d	1/Year	Grab
Chrysene	NA	ug/l	NL	kg/d	NA	NA	NA	ug/l	NL	kg/d	1/Year	Grab
Diethyl phthalate	NA	ug/l	0.45	kg/d	NA	NA	NA	ug/l	1.10	kg/d	1/Year	Grab
Dimethyl phthalate	NA	ug/l	0.18	kg/d	NA	NA	NA	ug/l	0.46	kg/d	1/Year	Grab
Di-n-butyl phthalate	NA	ug/l	0.19	kg/d	NA	NA	NA	ug/l	0.42	kg/d	1/Year	Grab
Ethylbenzene	NA	ug/l	1.38	kg/d	NA	NA	NA	ug/l	3.69	kg/d	1/Year	Grab

A. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Radford Army Ammunition Plant

1. Outfall 007 continued

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATION										MONITORING REQUIREMENTS	
	Monthly Average				Weekly Average	Minimum	Maximum				Frequency	Sample Type
Fluoranthene	NA	ug/l	0.21	kg/d	NA	NA	NA	ug/l	0.52	kg/d	1/Year	Grab
Fluorene	NA	ug/l	0.18	kg/d	NA	NA	NA	ug/l	0.46	kg/d	1/Year	Grab
Hexachlorobenzene	NA	ug/l	NL	kg/d	NA	NA	NA	ug/l	NL	kg/d	1/Year	Grab
Hexachlorobutadiene	NA	ug/l	1.38	kg/d	NA	NA	NA	ug/l	3.69	kg/d	1/Year	Grab
Hexachloroethane	NA	ug/l	1.90	kg/d	NA	NA	NA	ug/l	7.70	kg/d	1/Year	Grab
Methyl Chloride	NA	ug/l	1.07	kg/d	NA	NA	NA	ug/l	2.86	kg/d	1/Year	Grab
Methylene Chloride	NA	ug/l	0.35	kg/d	NA	NA	NA	ug/l	1.65	kg/d	1/Year	Grab
Naphthalene	NA	ug/l	0.18	kg/d	NA	NA	NA	ug/l	0.46	kg/d	1/Year	Grab
Nitrobenzene	NA	ug/l	21.69	kg/d	NA	NA	NA	ug/l	45.18	kg/d	1/Year	Grab
Phenanthrene	NA	ug/l	0.18	kg/d	NA	NA	NA	ug/l	0.46	kg/d	1/Year	Grab
Phenol	NA	ug/l	0.18	kg/d	NA	NA	NA	ug/l	0.46	kg/d	1/Year	Grab
Pyrene	NA	ug/l	0.19	kg/d	NA	NA	NA	ug/l	0.47	kg/d	1/Year	Grab
Tetrachloroethylene	NA	ug/l	0.50	kg/d	NA	NA	NA	ug/l	1.59	kg/d	1/Year	Grab
Toluene	NA	ug/l	0.27	kg/d	NA	NA	NA	ug/l	0.72	kg/d	1/Year	Grab
Total Cyanide	NA	ug/l	4.07	kg/d	NA	NA	NA	ug/l	11.64	kg/d	1/Year	Grab
Trichloroethylene	NA	ug/l	0.25	kg/d	NA	NA	NA	ug/l	0.67	kg/d	1/Year	Grab
Vinyl Chloride	NA	ug/l	NL	kg/d	NA	NA	NA	ug/l	NL	kg/d	1/Year	Grab

NL - No limitation, monitoring only; NA - Not applicable

2. The discharge shall have a pH value between 6.0 and 9.0 at all times, except as noted in Part I.B.12.

3. See Part I.C and Part I.D for additional TMP monitoring requirements.

4. There shall be no discharge of floating solids or visible foam in other than trace amounts.

5. See Part I.B.3 for quantification levels and reporting requirements.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS – Storm Event Monitoring

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall serial number 012.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Minimum	Maximum	Frequency	Sample Type
Flow (MG)	NA	NL	1/6 months	Estimate *
pH (SU)	6.0	9.0	1/6 months	Grab **
Sulfate (mg/l)	NA	NL	1/6 months	Grab **

NL - No limitation, monitoring only
NA - Not applicable

2. *Estimate of the total volume of the discharge during the storm event should be reported as flow. **A minimum of one grab sample is required. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event interval may also be waived where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the permittee shall submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable.

3. There shall be no discharge of floating solids or visible foam in other than trace amounts.

4. See Part I.B.3 for quantification levels and reporting requirements.

A. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Radford Army Ammunition Plant

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall serial number 014.

Such discharges of contaminated spring water shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATION				MONITORING REQUIREMENTS	
	Monthly Average	Weekly Average	Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	NL	NA	NA	NL	1/Month	Measure
pH (SU)	NA	NA	6.0	9.0	1/Month	Grab
Biochemical Oxygen Demand, 5 day, mg/l	NA	NA	NA	NL	1/Month	Grab
Chemical Oxygen Demand, mg/l	NA	NA	NA	NL	1/Month	Grab
Oxidized Nitrogen, mg/l	NA	NA	NA	NL	1/Month	Grab
Sulfate, mg/l	NA	NA	NA	NL	1/Month	Grab

NL - No limitation, monitoring only
NA - Not applicable

2. There shall be no discharge of floating solids or visible foam in other than trace amounts.

3. See Part I.B.3 for quantification levels and reporting requirements.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - STORM EVENT MONITORING

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall serial number 017.

Such discharges of storm water from the open burning ground shall be limited and monitored at outfall serial number 017 by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Minimum	Maximum	Frequency	Sample Type
Flow (MG)	NA	NL	1/Year	Estimate *
pH (SU)	NL	NL	1/Year	Grab **
Total Suspended Solids (mg/l)	NA	NL	1/Year	Grab **
Dissolved Copper (ug/l)	NA	NL	1/Year	Grab **
Dissolved Lead (ug/l)	NA	NL	1/Year	Grab **
Dissolved Zinc (ug/l)	NA	NL	1/Year	Grab **

NL - No limitation, monitoring only; NA - Not applicable

2. *Estimate of the total volume of the discharge during the storm event should be reported as flow. **A minimum of one grab sample is required. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event interval may also be waived where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the permittee shall submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable.

3. See special conditions I.B.13 for additional requirements.

4. There shall be no discharge of floating solids or visible foam in other than trace amounts.

5. See Part I.B.3 for quantification levels and reporting requirements.

A. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Radford Army Ammunition Plant

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall serial number 024.

Such discharges of filter backwash shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATION				MONITORING REQUIREMENTS	
	Monthly Average	Weekly Average	Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	NL	NA	NA	NL	1/Month	Estimate
pH (SU)	NA	NA	6.0	9.0	1/Month	Grab
Total Suspended Solids	30 mg/l	NA	NA	60 mg/l	1/Month	Grab
Ammonia, as Nitrogen	3.14 mg/l	NA	NA	3.14 mg/l	1/Month	Grab
Biochemical Oxygen Demand, 5 day, mg/l	NA	NA	NA	NL	1/Month	Grab
Chemical Oxygen Demand, mg/l	NA	NA	NA	NL	1/Month	Grab
Oxidized Nitrogen, mg/l	NA	NA	NA	NL	1/Month	Grab
Sulfate, mg/l	NA	NA	NA	NL	1/Month	Grab

NL - No limitation, monitoring only
NA - Not applicable

2. There shall be no discharge of floating solids or visible foam in other than trace amounts.

3. See Part I.B.3 for quantification levels and reporting requirements.

A. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS- Radford Army Ammunition Plant

1. During the period beginning with permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall serial number 026.

Such discharges of trickling filter plant effluent shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATION				MONITORING REQUIREMENTS	
	Monthly Average	Weekly Average	Minimum	Maximum	Frequency	Sample Type (2)
Flow (MGD)[7]	NL	NA	NA	NL	Continuous	Recorded
pH, S.U.	NA	NA	6.0	9.0	1/Day	Grab
pH, influent, S.U.	NA	NA	NL	NL	Continuous	Recorded
Biochemical Oxygen Demand, 5-day	30 mg/l 114 kg/d	NA	NA	45 mg/l 170 kg/d	3 Days/Week	8 Hour Composite
Total Suspended Solids	30 mg/l 114 kg/d	NA	NA	45 mg/l 170 kg/d	3 Days/Week	8 Hour Composite
Total Residual Chlorine (TRC) (mg/l) [3]	0.087	NA	NA	0.10	1/Day	Grab
Ammonia, as N, mg/l	10.6	NA	NA	13.4	1/Week	8 Hour Composite
Oxidized Nitrogen, mg/l	NA	NA	NA	NL	1/Month	8 Hour Composite
Sulfate, mg/l	NA	NA	NA	NL	1/Month	8 Hour Composite
Chemical Oxygen Demand, mg/l	NA	NA	NA	NL	1/Month	8 Hour Composite

NL - No limitation, monitoring only; NA - Not applicable

2. A 24 hour composite sample may be used as a substitute for an 8 hour composite sample.
3. See Part I.B.1 for additional TRC limitations and monitoring requirements.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts.
5. See Part I.B.3 for quantification levels and reporting requirements.
6. At least 85% removal for BOD and TSS must be attained, based on monthly averages, for this effluent.
7. The design flow of this treatment facility is 1.00 MGD.

A. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS- Radford Army Ammunition Plant

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall serial number 028.

Such discharges of treated sanitary wastewater shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATION				MONITORING REQUIREMENTS	
	Monthly Average	Weekly Average	Minimum	Maximum	Frequency	Sample Type [2]
Flow (MGD) [7]	NL	NA	NA	NL	3/Day	Estimate
pH, S.U.	NA	NA	6.0	9.0	1/Day	Grab
Biochemical Oxygen Demand, 5-day	30 mg/l 7.9 kg/d	NA	NA	45 mg/l 11.9 kg/d	1/Month	4 Hour Composite
Total Suspended Solids	30 mg/l 7.9 kg/d	NA	NA	45 mg/l 11.9 kg/d	1/Month	4 Hour Composite
Total Residual Chlorine (TRC) (mg/l)[3]	0.10	NA	NA	0.10	1/Day	Grab
Oxidized Nitrogen, mg/l	NA	NA	NA	NL	1/Month	4 Hour Composite
Sulfate, mg/l	NA	NA	NA	NL	1/Month	4 Hour Composite
Chemical Oxygen Demand, mg/l	NA	NA	NA	NL	1/Month	4 Hour Composite

NL - No limitation, monitoring only; NA - Not applicable;

2. A 24 hour composite sample may be used as a substitute for a 4 hour composite sample.
3. See Part I.B.1 for additional TRC limitations and monitoring requirements.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts.
5. See Part I.B.3 for quantification levels and reporting requirements.
6. At least 85% removal for BOD and TSS must be attained, based on monthly averages, for this effluent if flow is observed and facility is in operation.
7. The design flow of this treatment facility is 0.070 MGD.

A. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Radford Army Ammunition Plant

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall serial number 029.

Such discharges of bioplant effluent shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATION								MONITORING REQUIREMENTS	
	Monthly Average				Weekly Average	Minimum	Maximum		Frequency	Sample Type
Flow (MGD)		NL			NA	NA	NL		Continuous	Recorded
pH, S.U. [2]		NA			NA	6.0	9.0		Continuous	Recorded
Biochemical Oxygen Demand, 5 day	60	mg/l	91.2	kg/d	NA	NA	120 mg/l	243.6 kg/d	1/Week	24 Hour Composite
Total Suspended Solids	NL	mg/l	149.1	kg/d	NA	NA	NL mg/l	484.2 kg/d	1/Week	24 Hour Composite
Sulfate	NL	mg/l	3000	kg/d	NA	NA	NL mg/l	6000 kg/d	1/Month	24 Hour Composite
COD	200	mg/l	319.3	kg/d	NA	NA	290 mg/l	852.6 kg/d	1/Week	24 Hour Composite
Temperature		NA			NA	NA	NL °C		Continuous	Recorded
Heat Rejected, million BTU/day		NA			NA	NA	291		1/Day	Calculated
Acute Whole Effluent Toxicity [3]		NA			NA	NA	1 TUa		1/3 Months	24 Hour Composite
Oxidized Nitrogen, mg/l		NA			NA	NA	NL		1/Week	24 Hour Composite
BOD, 5 day, influent, mg/l		NA			NA	NA	NL		1/Month	24 Hour Composite
COD, influent, mg/l		NA			NA	NA	NL		1/Month	24 Hour Composite
TSS, influent, mg/l		NA			NA	NA	NL		1/Month	24 Hour Composite
N-nitroso-diphenylamine, ug/l		NA			NA	NA	NL		1/Year	24 Hour Composite

A. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Radford Army Ammunition Plant

1. Outfall 029 continued

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATION										MONITORING REQUIREMENTS	
	Monthly Average				Weekly Average	Minimum	Maximum				Frequency	Sample Type
2,4-Dinitrotoluene	NA	ug/l	0.41	kg/d	NA	NA	NA	ug/l	1.04	kg/d	1/Week	Grab
Acenaphthene	NA	ug/l	0.08	kg/d	NA	NA	NA	ug/l	0.21	kg/d	1/Year	Grab
Acrylonitrile	NA	ug/l	0.35	kg/d	NA	NA	NA	ug/l	0.88	kg/d	1/Year	Grab
Benzene	NA	ug/l	0.13	kg/d	NA	NA	NA	ug/l	0.49	kg/d	1/Year	Grab
Carbon tetrachloride	NA	ug/l	0.066	kg/d	NA	NA	NA	ug/l	0.13	kg/d	1/Year	Grab
Chlorobenzene	NA	ug/l	0.055	kg/d	NA	NA	NA	ug/l	0.10	kg/d	1/Year	Grab
1,2,4-Trichlorobenzene	NA	ug/l	0.24	kg/d	NA	NA	NA	ug/l	0.51	kg/d	1/Year	Grab
Hexachlorobenzene	NA	ug/l	NL	kg/d	NA	NA	NA	ug/l	NL	kg/d	1/Year	Grab
1,2-Dichloroethane	NA	ug/l	0.24	kg/d	NA	NA	NA	ug/l	0.77	kg/d	1/Year	Grab
1,1,1-Trichloroethane	NA	ug/l	0.077	kg/d	NA	NA	NA	ug/l	0.19	kg/d	1/Year	Grab
Hexachloroethane	NA	ug/l	0.077	kg/d	NA	NA	NA	ug/l	0.19	kg/d	1/Year	Grab
1,1-Dichloroethane	NA	ug/l	0.080	kg/d	NA	NA	NA	ug/l	0.21	kg/d	1/Year	Grab
1,1,2-Trichloroethane	NA	ug/l	0.077	kg/d	NA	NA	NA	ug/l	0.19	kg/d	1/Year	Grab
Chloroethane	NA	ug/l	0.38	kg/d	NA	NA	NA	ug/l	0.98	kg/d	1/Year	Grab
Chloroform	NA	ug/l	0.077	kg/d	NA	NA	NA	ug/l	0.16	kg/d	1/Year	Grab
2-Chlorophenol	NA	ug/l	0.11	kg/d	NA	NA	NA	ug/l	0.35	kg/d	1/Year	Grab
1,2-Dichlorobenzene	NA	ug/l	0.28	kg/d	NA	NA	NA	ug/l	0.59	kg/d	1/Year	Grab
1,3-Dichlorobenzene	NA	ug/l	0.11	kg/d	NA	NA	NA	ug/l	0.16	kg/d	1/Year	Grab
1,4-Dichlorobenzene	NA	ug/l	0.055	kg/d	NA	NA	NA	ug/l	0.10	kg/d	1/Year	Grab
1,1-Dichloroethylene	NA	ug/l	0.059	kg/d	NA	NA	NA	ug/l	0.091	kg/d	1/Year	Grab
1,2-trans-Dichloroethylene	NA	ug/l	0.077	kg/d	NA	NA	NA	ug/l	0.19	kg/d	1/Year	Grab
2,4-Dichlorophenol	NA	ug/l	0.14	kg/d	NA	NA	NA	ug/l	0.41	kg/d	1/Year	Grab
1,2-Dichloropropane	NA	ug/l	0.55	kg/d	NA	NA	NA	ug/l	0.84	kg/d	1/Year	Grab
1,3-Dichloropropylene	NA	ug/l	0.10	kg/d	NA	NA	NA	ug/l	0.16	kg/d	1/Year	Grab
2,4-Dimethylphenol	NA	ug/l	0.066	kg/d	NA	NA	NA	ug/l	0.13	kg/d	1/Year	Grab
2,6-Dinitrotoluene	NA	ug/l	0.93	kg/d	NA	NA	NA	ug/l	2.34	kg/d	1Year	Grab
Ethylbenzene	NA	ug/l	0.11	kg/d	NA	NA	NA	ug/l	0.39	kg/d	1/Year	Grab
Fluoranthene	NA	ug/l	0.091	kg/d	NA	NA	NA	ug/l	0.24	kg/d	1/Year	Grab
Methylene Chloride	NA	ug/l	0.14	kg/d	NA	NA	NA	ug/l	0.32	kg/d	1/Year	Grab
Methyl Chloride	NA	ug/l	0.31	kg/d	NA	NA	NA	ug/l	0.69	kg/d	1/Year	Grab
Hexachlorobutadiene	NA	ug/l	0.073	kg/d	NA	NA	NA	ug/l	0.17	kg/d	1/Year	Grab
Naphthalene	NA	ug/l	0.080	kg/d	NA	NA	NA	ug/l	0.21	kg/d	1/Year	Grab
Nitrobenzene	NA	ug/l	0.099	kg/d	NA	NA	NA	ug/l	0.24	kg/d	1/Year	Grab
2-Nitrophenol	NA	ug/l	0.15	kg/d	NA	NA	NA	ug/l	0.25	kg/d	1/Year	Grab
4-Nitrophenol	NA	ug/l	0.26	kg/d	NA	NA	NA	ug/l	0.45	kg/d	1/Year	Grab
2,4-Dinitrophenol	NA	ug/l	0.26	kg/d	NA	NA	NA	ug/l	0.45	kg/d	1/Year	Grab
4,6-Dinitro-o-cresol	NA	ug/l	0.28	kg/d	NA	NA	NA	ug/l	1.01	kg/d	1/Year	Grab

A. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Radford Army Ammunition Plant

1. Outfall 029 continued

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATION										MONITORING REQUIREMENTS	
	Monthly Average				Weekly Average	Minimum	Maximum				Frequency	Sample Type
Phenol	NA	ug/l	0.055	kg/d	NA	NA	NA	ug/l	0.095	kg/d	1/Year	Grab
Bis(2-ethylhexyl)phthalate	NA	ug/l	0.37	kg/d	NA	NA	NA	ug/l	1.02	kg/d	1/Year	Grab
Di-n-butyl phthalate	NA	ug/l	0.099	kg/d	NA	NA	NA	ug/l	0.20	kg/d	1/3 Months	Grab
Diethyl phthalate	NA	ug/l	0.29	kg/d	NA	NA	NA	ug/l	0.74	kg/d	1/Year	Grab
Dimethyl phthalate	NA	ug/l	0.069	kg/d	NA	NA	NA	ug/l	0.17	kg/d	1/Year	Grab
Benzo(a)anthracene	NA	ug/l	NL	kg/d	NA	NA	NA	ug/l	NL	kg/d	1/Year	Grab
Benzo(a)pyrene	NA	ug/l	NL	kg/d	NA	NA	NA	ug/l	NL	kg/d	1/Year	Grab
3,4-Benzofluoranthene	NA	ug/l	0.084	kg/d	NA	NA	NA	ug/l	0.22	kg/d	1/Year	Grab
Benzo(k)fluoranthene	NA	ug/l	NL	kg/d	NA	NA	NA	ug/l	NL	kg/d	1/Year	Grab
Chrysene	NA	ug/l	NL	kg/d	NA	NA	NA	ug/l	NL	kg/d	1/Year	Grab
Acenaphthylene	NA	ug/l	0.080	kg/d	NA	NA	NA	ug/l	0.21	kg/d	1/Year	Grab
Anthracene	NA	ug/l	0.080	kg/d	NA	NA	NA	ug/l	0.21	kg/d	1/Year	Grab
Fluorene	NA	ug/l	0.080	kg/d	NA	NA	NA	ug/l	0.21	kg/d	1/Year	Grab
Phenanthrene	NA	ug/l	0.080	kg/d	NA	NA	NA	ug/l	0.21	kg/d	1/Year	Grab
Pyrene	NA	ug/l	0.091	kg/d	NA	NA	NA	ug/l	0.24	kg/d	1/Year	Grab
Tetrachloroethylene	NA	ug/l	0.080	kg/d	NA	NA	NA	ug/l	0.20	kg/d	1/Year	Grab
Toluene	NA	ug/l	0.095	kg/d	NA	NA	NA	ug/l	0.29	kg/d	1/Year	Grab
Trichloroethylene	NA	ug/l	0.077	kg/d	NA	NA	NA	ug/l	0.19	kg/d	1/Year	Grab
Vinyl Chloride	NA	ug/l	NL	kg/d	NA	NA	NA	ug/l	NL	kg/d	1/Year	Grab
Total Chromium	NA	ug/l	4.05	kg/d	NA	NA	NA	ug/l	10.1	kg/d	1/3 Months	24 HC
Total Copper	NA	ug/l	5.30	kg/d	NA	NA	NA	ug/l	12.3	kg/d	1/3 Months	24HC
Total Cyanide	NA	ug/l	1.53	kg/d	NA	NA	NA	ug/l	4.38	kg/d	1/Year	Grab
Total Lead	NA	ug/l	1.17	kg/d	NA	NA	NA	ug/l	2.52	kg/d	1/3 Months	24 HC
Total Nickel	NA	ug/l	6.17	kg/d	NA	NA	NA	ug/l	14.55	kg/d	1/3 Months	24 HC
Total Zinc	NA	ug/l	3.83	kg/d	NA	NA	NA	ug/l	9.54	kg/d	1/3 Months	24 HC

NL - No limitation, monitoring only; NA - Not applicable

2. The discharge shall have a pH value between 6.0 and 9.0 at all times, except as noted in Part I.B.12.
3. See Part I.C and I.D for additional TMP monitoring requirements.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts.
5. See Part I.C.3 for quantification levels and reporting requirements.

A. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Radford Army Ammunition Plant

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall serial number 291.

Such discharges of TNT or DNT manufacturing wastewater shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATION								MONITORING REQUIREMENTS	
	Monthly Average			Weekly Average	Minimum	Maximum			Frequency	Sample Type
Flow (MGD)		NL		NA	NA		NL		1/D-Week	Measure
TNT Nitrobodies	NL	mg/l	0.9 kg/d	NA	NA	NL	mg/l	1.3 kg/d	1/D-Week	Grab

NL - No limitation, monitoring only
NA - Not applicable
1/D-Week – Once per discharge week

2. Monitoring and limitations at this outfall apply only when the manufacturing area is active.

3. See Part I.B.3 for quantification levels and reporting requirements.

A. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - Radford Army Ammunition Plant

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall serial number 999.

Such discharges shall be limited and monitored by the permittee at outfalls 402, 005, 006, 007, 014, 024, 026, 028 and 029 and added arithmetically to form outfall 999 as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATION				MONITORING REQUIREMENTS	
	Monthly Average	Weekly Average	Minimum	Maximum	Frequency	Sample Type
Biochemical Oxygen Demand, 5 day	6700 kg/d	NA	NA	10000 kg/d	1/Month	Calculated
Total Suspended Solids	6200 kg/d	NA	NA	9300 kg/d	1/Month	Calculated
Chemical Oxygen Demand	14500 kg/d	NA	NA	22000 kg/d	1/Month	Calculated
Sulfate	50000 kg/d	NA	NA	75000 kg/d	1/Month	Calculated
Oxidized Nitrogen	6600 kg/d	NA	NA	10000 kg/d	1/Month	Calculated
Vinyl Chloride	0.90 kg/d	NA	NA	1.36 kg/d	1/Year	Calculated
Chrysene	0.18 kg/d	NA	NA	0.26 kg/d	1/Year	Calculated
Benzo(a)anthracene	0.18 kg/d	NA	NA	0.26 kg/d	1/Year	Calculated
Benzo(a)pyrene	0.18 kg/d	NA	NA	0.26 kg/d	1/Year	Calculated
Benzo(k)fluoranthene	0.18 kg/d	NA	NA	0.26 kg/d	1/Year	Calculated
Hexachlorobenzene	0.03 kg/d	NA	NA	0.04 kg/d	1/Year	Calculated

NL - No limitation, monitoring only
NA - Not applicable

2. There shall be no discharge of floating solids or visible foam in other than trace amounts.
3. See Part I.B.3 for quantification levels and reporting requirements.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - STORM EVENT MONITORING

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall serial number 041.

Such discharges shall be limited and monitored on a rotating basis by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Minimum	Maximum	Frequency	Sample Type
Flow (MG)	NA	NL	1/3 Months	Estimate *
Oil and Grease (mg/l)	NA	NL	1/3 Months	Grab **
Total Suspended Solids (mg/l)	NA	NL	1/3 Months	Grab **

*Estimate of the total volume of the discharge during the storm event should be reported as flow.

**A minimum of one grab sample is required. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event interval may also be waived where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the permittee shall submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable.

2. Monitoring shall be rotated among the outfalls designated as Zone G in the facility Fact Sheet.

3. There shall be no discharge of floating solids or visible foam in other than trace amounts.

4. See Part I.B.3 for quantification levels and reporting requirements.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - STORM EVENT MONITORING

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall serial number 044.

Such discharges shall be limited and monitored on a rotating basis by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Minimum	Maximum	Frequency	Sample Type
Flow (MG)	NA	NL	1/6 Months	Estimate *
Oil and Grease (mg/l)	NA	NL	1/6 Months	Grab **
Total Suspended Solids (mg/l)	NA	NL	1/6 Months	Grab **

*Estimate of the total volume of the discharge during the storm event should be reported as flow.

**A minimum of one grab sample is required. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event interval may also be waived where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the permittee shall submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable.

2. Monitoring shall occur at stormwater location 15C in Zone E as designated in the facility Fact Sheet.

3. There shall be no discharge of floating solids or visible foam in other than trace amounts.

4. See Part I.B.3 for quantification levels and reporting requirements.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - STORM EVENT MONITORING

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall serial number 050.

Such discharges shall be limited and monitored on a rotating basis by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Minimum	Maximum	Frequency	Sample Type
Flow (MG)	NA	NL	1/6 Months	Estimate *
Oil and Grease (mg/l)	NA	NL	1/6 Months	Grab **
Total Suspended Solids (mg/l)	NA	NL	1/6 Months	Grab **
Nitrate/Nitrite (mg/l)	NA	NL	1/6 Months	Grab **
Dissolved Lead (ug/l)	NA	NL	1/6 Months	Grab **

*Estimate of the total volume of the discharge during the storm event should be reported as flow.
**A minimum of one grab sample is required. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event interval may also be waived where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the permittee shall submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable.

2. Monitoring shall be rotated among the outfalls designated as Zone D in the facility Fact Sheet.

3. There shall be no discharge of floating solids or visible foam in other than trace amounts.

4. See Part I.B.3 for quantification levels and reporting requirements.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - STORM EVENT MONITORING

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall serial number 054.

Such discharges shall be limited and monitored on a rotating basis by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Minimum	Maximum	Frequency	Sample Type
Flow (MG)	NA	NL	1/year	Estimate *
Total Suspended Solids (mg/l)	NA	NL	1/year	Grab **
Dissolved Zinc (ug/l)	NA	NL	1/year	Grab **

*Estimate of the total volume of the discharge during the storm event should be reported as flow.

**A minimum of one grab sample is required. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event interval may also be waived where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the permittee shall submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable.

2. Monitoring shall be rotated among the outfalls designated as Zone C in the facility Fact Sheet.

3. There shall be no discharge of floating solids or visible foam in other than trace amounts.

4. See Part I.B.3 for quantification levels and reporting requirements.

B. Special Conditions

1. **Additional TRC Limitations and Monitoring Requirements at Outfall 026 and Outfall 028**

a. In addition to the final effluent (after dechlorination) limitations in Part I.A for outfalls 026 and 028, the permittee shall monitor TRC at the outlet of each operating chlorine contact tank and prior to dechlorination three times a day at 4 hour intervals by grab sample.

b. For each outfall, no more than 9 samples for TRC taken after the chlorine contact tank and prior to dechlorination shall be less than 1.5 mg/l for any one calendar month. [DMR Code #157]

c. No TRC sample collected after the chlorine contact tank and prior to dechlorination shall be less than 0.60 mg/l. [DMR Code #213]

d. If chlorine disinfection is not used, E. coli shall be limited and monitored by the permittee as specified below and this requirement, if applicable, shall substitute for the TRC requirements delineated elsewhere in Part I of this permit.

	Monthly Average	Frequency	Sample Type
E.coli (N/100 ml)	126*	4/month, 10am – 4pm	Grab

*Monthly Geometric Mean

2. **Notification Levels** - The permittee shall notify the Department as soon as they know or have reason to believe:

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:

(1) One hundred micrograms per liter;

(2) Two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter for antimony;

(3) Five times the maximum concentration value reported for that pollutant in the permit application; or

(4) The level established by the Board.

b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:

(1) Five hundred micrograms per liter;

(2) One milligram per liter for antimony;

(3) Ten times the maximum concentration value reported for that pollutant in the permit application; or

(4) The level established by the Board.

3. **Compliance Reporting under Part I.A, Part I.B, and Part I.C**

a. The quantification levels (QL) shall be less than or equal to the following concentrations:

Effluent Parameter	Quantification Level
BOD5	5.0 mg/l
COD	10 mg/L
TSS	1.0 mg/l

Chlorine	0.10 mg/l
Oil & Grease	5.0 mg/L
Ammonia-N	0.20 mg/l
Sulfate	1.0 mg/L
Nitrate/Nitrite as N	0.5 mg/L
Total Recoverable Cadmium	10 µg/L
Total Recoverable Copper	3.0 µg/L
Total Recoverable Nickel	10 µg/L
Total Recoverable Zinc	10 µg/L
Total Recoverable Chromium	10 µg/L
Total Recoverable Lead	10 µg/L
2,4-Dinitrotoluene	10 µg/L
2,6-Dinitrotoluene	10 µg/L
2-Chlorophenol	10 µg/L
2,4-Dichlorophenol	10 µg/L
N-nitroso-diphenylamine	20 µg/L
2-Nitrophenol	20 µg/L
4-Nitrophenol	50 µg/L
1,1-Dichloroethane	10 µg/L
1,2-Dichloroethane	10 µg/L
1,2-trans-Dichloroethylene	10 µg/L
1,1-Dichloroethylene	10 µg/L
1,2-Dichlorobenzene	10 µg/L
1,3-Dichlorobenzene	10 µg/L
1,4-Dichlorobenzene	10 µg/L
1,2-Dichloropropane	10 µg/L
1,3-Dichloropropylene	10 µg/L
2,4-Dimethylphenol	10 µg/L
2,4-Dinitrophenol	50 µg/L
4,6-Dinitro-o-cresol	50 µg/L
1,1,1-Trichloroethane	10 µg/L
1,1,2-Trichloroethane	10 µg/L
1,2,4-Trichlorobenzene	10 µg/L
Acenapthene	10 µg/L
Acenaphthylene	10 µg/L
Acrylonitrile	50 µg/L
Anthracene	10 µg/L
Benzene	10 µg/L
Benzo(a)anthracene	10 µg/L
3,4-Benzofluoranthene	10 µg/L
Benzo(a)pyrene	10 µg/L
Benzo(k)fluoranthene	10 µg/L
Bis(2-ethylhexyl)phthalate	10 µg/L
Carbon tetrachloride	10 µg/L
Chlorobenzene	50 µg/L
Chloroethane	10 µg/L
Chloroform	10 µg/L
Chrysene	10 µg/L
Diethyl phthalate	10 µg/L
Dimethyl phthalate	10 µg/L
Di-n-butyl phthalate	10 µg/L
Ethylbenzene	10 µg/L
Fluoranthene	10 µg/L

Fluorene	10 µg/L
Hexachlorobenzene	10 µg/L
Hexachlorobutadiene	10 µg/L
Hexachloroethane	10 µg/L
Methyl Chloride	50 µg/L
Methylene Chloride	20 µg/L
Naphthalene	10 µg/L
Nitrobenzene	10 µg/L
Phenanthrene	10 µg/L
Phenol	10 µg/L
Pyrene	10 µg/L
Tetrachloroethylene	10 µg/L
Toluene	10 µg/L
Total Cyanide	20 µg/L
Trichloroethylene	10 µg/L
Vinyl Chloride	10 µg/L
TNT Nitrobodies	10 ug/L

The QL is defined as the lowest concentration used to calibrate a measurement system in accordance with the procedures published for the method. It is the responsibility of the permittee to ensure that proper quality assurance/quality control (QA/QC) protocols are followed during the sampling and analytical procedures. QA/QC information shall be documented to confirm that appropriate analytical procedures have been used and the required QLs have been attained. The permittee shall use any method in accordance with Part II.A of this permit.

b. Reporting

Monthly Average -- Compliance with the monthly average limitations and/or reporting requirements for the parameters listed in subsection a. of this permit condition shall be determined as follows: All concentration data below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as zero. All concentration data equal to or above the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as it is reported. An arithmetic average shall be calculated using all reported data for the month, including the defined zeros. This arithmetic average shall be reported on the Discharge Monitoring Report (DMR) as calculated. If all data are below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above), then the average shall be reported as "<QL". If reporting for quantity is required on the DMR and the reported monthly average concentration is <QL, then report "<QL" for the quantity. Otherwise use the reported concentration data (including the defined zeros) and flow data for each sample day to determine the daily quantity and report the monthly average of the calculated daily quantities.

Weekly Average – Compliance with the weekly average limitations and/or reporting requirements for the parameters listed in subsection a. of this permit condition shall be determined as follows: All concentration data below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as zero. All concentration data equal to or above the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as reported. An arithmetic average shall be calculated using all reported data, including the defined

zeros, collected within each complete calendar week and entirely contained within the reporting month. The maximum value of the weekly averages thus determined shall be reported on the DMR. If all data are below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above), then the weekly average shall be reported as "<QL". If reporting for quantity is required on the DMR and the reported weekly average concentration is <QL, then report "<QL" for the quantity. . Otherwise use the reported concentration data (including the defined zeros) and flow data for each sample day to determine the daily quantity and report the maximum weekly average of the calculated daily quantities.

Daily Maximum -- Compliance with the daily maximum limitations and/or reporting requirements for the parameters listed in subsection a. of this permit condition shall be determined as follows: All concentration data below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as zero. All concentration data equal to or above the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as reported. An arithmetic average shall be calculated using all reported data, including the defined zeros, collected within each day during the reporting month. The maximum value of these daily averages thus determined shall be reported on the DMR as the Daily Maximum. If all data are below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above), then the maximum value of the daily averages shall be reported as "<QL". If reporting for quantity is required on the DMR and the reported daily maximum is <QL, then report "<QL" for the quantity. Otherwise use the reported daily average concentrations (including the defined zeros) and corresponding daily flows to determine daily average quantities and report the maximum of the daily average quantities during the reporting month.

c. Any single datum required shall be reported as "<QL" if it is less than the QL in a. above. Otherwise the numerical value shall be reported.

d. The permittee shall report at least the same number of significant digits as the permit limit for a given parameter. Regardless of the rounding convention used by the permittee (i.e., 5 always rounding up or to the nearest even number), the permittee shall use the convention consistently, and shall ensure that consulting laboratories employed by the permittee use the same convention.

4. **EPA Industrial Reopener** -- This permit shall be modified, or alternatively revoked and reissued, to comply with any applicable effluent standard, limitation or prohibition for a pollutant which is promulgated or approved under Sections 307(a)(2) of the Clean Water Act, if the effluent standard or limitation or prohibition so promulgated or approved:
   a. Is more stringent than any effluent limitation on the pollutant already in the permit; or
   b. Controls any pollutant not limited in the permit.

5. **Storm Water Reopener** - This permit shall be modified or alternatively revoked and reissued to comply with or reflect any minimum treatment requirement, water quality standard or effluent limitation or other action approved by the Board with regard to storm water regulations.

6. **Sewage Sludge Reopener** -- The Board may promptly modify or revoke and reissue this permit if any applicable standard for sewage sludge use or disposal promulgated under Section 405(d) of the Clean Water Act is more stringent than any requirements for sludge use or disposal in this permit, or controls a pollutant or practice not limited in this permit.

7. **Nutrient Enriched Waters Reopener** - This permit may be modified or alternatively revoked and reissued to include new or alternative nutrient limitations and/or monitoring requirements should the Board adopt nutrient standards for the waterbody receiving the discharge or if a future water quality regulation or statute requires new or alternative nutrient control.

8. **Water Quality Criteria Reopener** – Should effluent monitoring indicate the need for any water quality-based limitations, this permit may be modified or alternatively revoked and reissued to incorporate appropriate limitations.

9. **Total Maximum Daily Load (TMDL) Reopener** - This permit shall be modified or alternatively revoked and reissued if any approved wasteload allocation procedure, pursuant to Section 303(d) of the Clean Water Act, imposes wasteload allocations, limits or conditions on the facility that are not consistent with the permit requirements.

10. **Requirements For Sewage Treatment Plants - Outfalls 026 and 028**

a. **95% Capacity Reopener** -- A written notice and a plan of action for ensuring continued compliance with the terms of this permit shall be submitted to DEQ Blue Ridge Regional Office when the monthly average flow influent to the sewage treatment plant reaches 95 percent of the design capacity authorized in this permit for each month of any three consecutive month period. The written notice shall be submitted within 30 days and the plan of action shall be received at the DEQ Blue Ridge Regional Office no later than 90 days from the third consecutive month for which the flow reached 95 percent of the design capacity. The plan shall include the necessary steps and a prompt schedule of implementation for controlling any current or reasonably anticipated problem resulting from high influent flows. Failure to submit an adequate plan in a timely manner shall be deemed a violation of this permit.

b. **Indirect Dischargers** -- The permittee shall provide adequate notice to the Department of the following:

1. Any new introduction of pollutants into the sewage treatment works from an indirect discharger which would be subject to Section 301 or 306 of Clean Water Act and the State Water Control Law if it were directly discharging those pollutants; and
2. Any substantial change in the volume or character of pollutants being introduced into the sewage treatment works by a source introducing pollutants into the treatment works at the time of issuance of this permit.

Adequate notice shall include information on (i) the quality and quantity of effluent introduced into the sewage treatment works, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the treatment

works.

c. **CTC, CTO Requirement** - The permittee shall, in accordance with the DEQ Sewage Collection and Treatment Regulation (9VAC 25-790), obtain a Certificate to Construct (CTC), and a Certificate to Operate (CTO) from the DEQ Office of Wastewater Engineering (for Water Quality Improvement Funded (WQIF) projects) or submitted by the design engineer and owner to the DEQ regional water permit manager (for non WQIF projects) prior to constructing wastewater treatment works and operating the treatment works, respectively. Non-compliance with the CTC or CTO shall be deemed a violation of the permit.

d. **Operation and Maintenance Manual Requirement** - The permittee shall review the existing Operations and Maintenance (O & M) Manuals and notify the DEQ Regional Office, in writing, whether they are still accurate and complete. If the O & M Manuals are no longer accurate and complete, revised O & M Manuals shall be submitted for approval to the DEQ Regional Office within 270 days of **June 10, 2010.** The permittee will maintain an accurate, approved operation and maintenance manuals for the treatment works. These manuals shall detail the practices and procedures which will be followed to ensure compliance with the requirements of the permit. The permittee shall operate the treatment works accordance with the approved O&M Manuals. These manuals shall include, but not necessarily be limited to, the following items, as appropriate:

   a. Techniques to be employed in the collection, preservation, and analysis of effluent samples (and sludge samples if sludge analyses are required);
   b. Procedures for measuring and recording the duration and volume of treated wastewater discharged;
   c. Discussion of Best Management Practices, if applicable;
   d. Procedures for handling, storing, and disposing of all wastes, fluids, and pollutants that will prevent these materials from reaching state waters;
   e. Treatment works design, treatment works operation, routine preventative maintenance of units within the treatment system, critical spare parts inventory and record keeping; and
   f. A plan for the management and/or disposal of waste solids and residues.

   Any changes in the practices and procedures followed by the permittee shall be documented and submitted for DEQ Regional staff approval within 90 days of the effective date of the changes. Upon approval of the submitted manual changes, the revised manual becomes an enforceable part of the permit. Noncompliance with the O & M Manual shall be deemed a violation of the permit.

e. **Reliability Class** - The permitted Trickling Filter (Outfall 026) treatment works shall meet Reliability Class I.

11. **Materials Handling/Storage --** Any and all product, materials, industrial wastes, and/or other wastes resulting from the purchase, sale, mining, extraction, transport, preparation, and/or storage of raw or intermediate materials, final product, by-product or wastes, shall be handled, disposed of, and/or stored in such a manner and consistent with Best Management Practices, so as not to permit a discharge of such product, materials, industrial

wastes, and/or other wastes to State waters, except as expressly authorized.

12. **Excursion Time** -- The total time limit for pH excursions of 7 hours and 26 minutes in any calendar month shall apply to the excursions for outfalls 005, 006, 007, and 029. The time limit of 60 minutes for an individual excursion shall also apply to these outfalls. The time limitations only apply to pH excursions outside the range of 6.0 to 9.0 and within the range 4.0 to 11.0. All excursions exceeding the range 4.0 to 11.0 are violations and shall be reported. After individual excursions exceeding 60 minutes or the 4.0 to 11.0 range the receiving stream shall be examined for evidence of environmental damage. Notification required by Part II of this permit shall include this information.

13. **Conceptual Engineering Reports**
    a. A conceptual engineering report (CER) shall be submitted to the DEQ Regional Office at least 60 days prior to the any modification of the storm water treatment unit discharging to Outfall 017 to ensure that the unit is properly designed and operated. The design should meet specifications in the *Virginia Erosion and Sediment Control Handbook.*
    b. A CER shall be submitted at least 180 days prior to the planned discharge of previously unpermitted flows. The report shall present an evaluation of the effectiveness of each wastewater treatment facility. At a minimum, the report shall relate pertinent design parameters to hydraulic and organic loading; past, projected and mobilization production rates; VPDES permit limitations; and effluent toxicity. The permittee shall not reroute wastewater flows without prior approval from the Regional staff.

14. **Best Management Practices (BMP) Plan** – A Best Management Practice (BMP) plan for control of leaks, spills and storm water runoff from the facility shall be developed and submitted for staff approval within 90 days of June 10, 2010. Upon approval, the BMP becomes an enforceable part of the permit. The permittee shall amend the BMP plan whenever there is a change in the facility or operation of the facility which materially increases the potential to discharge significant amounts of pollutants or if the BMP plan proves to be ineffective in preventing the release of significant amounts of pollutants. Changes to the BMP plan shall be submitted for staff approval within 90 days of the effective date of the changes. Upon approval, the amended BMP plan becomes an enforceable part of the permit.

15. **Operations and Maintenance Manuals** -- The permittee shall review the existing Operations and Maintenance (O & M) Manuals and notify the DEQ Regional Office, in writing, within 90 days of June 10, 2010 whether they are still accurate and complete. If any O & M Manual is no longer accurate and complete, a revised O & M Manual shall be submitted for approval to the DEQ Regional Office within 90 days of June 10, 2010. The permittee will maintain an accurate, approved operation and maintenance manual for each treatment works. These manuals shall detail the practices and procedures which will be followed to ensure compliance with the requirements of the permit. The permittee shall operate the treatment works accordance with the approved O&M Manuals. These manuals shall include, but not necessarily be limited to, the following items, as appropriate:
    a. Techniques to be employed in the collection, preservation, and analysis of effluent samples;

b. Procedures for measuring and recording the duration and volume of treated wastewater discharged;
c. Discussion of Best Management Practices, if applicable;
d. Procedures for handling, storing, and disposing of all wastes, fluids, and pollutants characterized in Part I. B.10 that will prevent these materials from reaching state waters; and
e. Treatment works design, treatment works operation, routine preventative maintenance of units within the treatment system, critical spare parts inventory and record keeping;
f. A plan for the management and/or disposal of waste solids and residues;

Any changes in the practices and procedures followed by the permittee shall be documented and submitted for DEQ Regional staff approval within 90 days of the effective date of the changes. Upon approval of the submitted manual changes, the revised manual becomes an enforceable part of the permit. Noncompliance with the O & M Manuals shall be deemed a violation of the permit.

16. **Sewage Sludge Use and Disposal** - The permittee shall conduct all sewage sludge use or disposal activities in accordance with the Sludge Management Plan (SMP) approved with the issuance of this permit. Any proposed changes in the sewage sludge use or disposal practices or procedures followed by the permittee shall be documented and submitted for DEQ and Department of Health approval 90 days prior to the effective date of the changes. Upon approval, the revised SMP becomes an enforceable part of the permit. The permit may be modified or alternatively revoked and reissued to incorporate limitations or conditions necessitated by substantive changes in sewage sludge use or disposal practices.

17. **Licensed Operator Requirement** -- The permittee shall employ or contract at least one licensed wastewater works operator who holds a current wastewater license appropriate for the following permitted facilities.

Class of licensed operator	Facility (outfall)
I	Bioplant (029)
II	Waste Acid Neutralization (007)
II	Trickling filter STP (026)
III	Imhoff STP (028)

The license shall be issued in accordance with Title 54.1 of the Code of Virginia and the regulations of the Board for Waterworks and Wastewater Works Operators. The permittee shall notify the Department in writing whenever he is not complying, or has grounds for anticipating he will not comply with this requirement. The notification shall include a statement of reasons and a prompt schedule for achieving compliance.

18. **Cooling Water and Boiler Additives**

a. If at any time during the life of the permit, the permittee decides to treat any noncontact cooling water unit(s) and/or boiler systems with chemical additives, the following requirements shall be satisfied. Thirty (30) days prior to implementing any chemical addition to the cooling water and/or boiler equipment, the permittee shall

notify the DEQ Regional Office, in writing, of the following:

1) Chemical additives to be employed and their purpose. Provide a Material Safety Data Sheet (MSDS) for each proposed additive.
2) Schedule of additive usage and,
3) Wastewater treatment and/or retention to be provided during the use of additives.

b. Should the addition of treatment chemicals significantly alter the characteristics of the effluent from the cooling water unit(s) or if their usage becomes persistent or continuous, this permit shall be modified, or alternatively revoked and reissued to include appropriate limitations or conditions.

c. Concentrations of priority pollutants contained in chemicals added to cooling towers shall be non-detectable.

19. **Daily Inspections** -- Inspection of all continuous outfalls shall be performed daily and documented in a daily log. Unusual and unauthorized discharges shall be reported as detailed in Part II.G, Part II.H, and Part II.I of this permit.

20. **Thermal Mixing Zones** -- The application for reissuance of this permit shall state whether conditions used as a basis for thermal mixing zones have changed. Any changes should be explained and quantified, if possible.

21. **OCPSF Flows** - The permittee shall monitor process wastewater flows applicable to the Organic Chemicals, Plastics and Synthetic Fibers effluent. A report of the monthly OCPSF flows shall be submitted to the Blue Ridge Regional Office with the application for reissuance.

22. **Storm Water Management Evaluation** - The Storm Water Pollution Prevention Plan (SWPPP), developed in accordance with **Part I.E** and **Part I.F**, shall have a goal of reducing pollutants discharged from all the regulated industrial activity storm water outfalls. One goal of the SWPPP is to reduce, to the maximum extent practicable, the following pollutants in the outfalls noted below.

Outfall	Parameter	Comparative Value
Outfall 004	Nitrate/nitrite As N	1.76 mg/L
Outfall 017	Total Suspended Solids	100 µg/L
	Copper, dissolved	22 µg/L
	Lead, dissolved	170 µg/L
	Zinc, dissolved;	190 µg/L
Outfall 041	Total Suspended Solids	100 µg/L
	Oil and Grease	15 µg/L
Outfall 044	Total Suspended Solids	100 µg/L
	Oil and Grease	15 µg/L

The effectiveness of the SWPPP shall be evaluated via monitoring for these parameters listed as specified in Part I.A. of this permit for these outfalls. The permittee shall review its Best

Management Practices and Storm Water Pollution Prevention Plan and amend the Plans, as appropriate, to include additional practices whenever monitoring results are above their respective comparative values or if there is a change in the facility or change in the operation of the facility which materially increases the potential for activities to result in a discharge of significant amounts of pollutants. The permittee shall submit to the Blue Ridge Regional Office an annual report by January 10 of each year that includes the monitoring data from the annual monitoring period of January through December, the status of the SWPPP program, and a summary of amendments to the SWPPP. The first report is due on January 10, 2011.

23. **Monitoring for Polychlorinated Biphenyl Compounds**

The permittee shall monitor the effluent at Outfall 401, 006, 007, 024, 026, 029, and 041 (Drainage Area 6A) for Polychlorinated Biphenyls (PCBs) in accordance with the schedule in 23.f. below. DEQ will use these data for development or implementation of a PCB TMDL for the New River River. The permittee shall conduct the sampling and analysis in accordance with the requirements specified below. At a minimum:

a. Monitoring and analysis shall be conducted in accordance with the most current version of EPA Method 1668, congener specific results as specified in the PCB Point Source Monitoring Guidance. It is the responsibility of the permittee to ensure that proper QA/QC protocols are followed during the sample gathering and analytical procedures.

b. The permittee shall collect a minimum of two (2) wet weather samples at Outfalls 401 and 041, two (2) dry weather samples at Outfalls 006, 007, 024, 026, and 029, and two (2) dry weather samples and two (2) wet weather samples at Outfall 026 according to the PCB Point Source Guidance No. 09-2001, Appendix C (Sample Collection Methods for Effluent and Storm Water) and/or its amendments. Samples previously collected and analyzed with Method 1668, may be used in satisfying the total number of samples required even if the collection occurred prior to the current permit term.

c. The sampling protocol shall be submitted to the DEQ - Blue Ridge Regional Office for review and approval in accordance with the schedule in 23.f. below prior to the first sample collection.

d. The data shall be submitted to the DEQ - Blue Ridge Regional Office by the 10th day of the month following receipt of the results according to the PCB Point Source Guidance No. 09-2001, Appendix E (Reporting Requirements for Analytical (PCB) Data Generated Using EPA Method 1668) and/or its amendments. The submittal shall include the unadjusted and appropriately quantified individual PCB congener analytical results. Additionally, laboratory and field QA/QC documentation and results should be reported. Total PCBs are to be computed as the summation of the reported, quantified congeners.

e. If the results of this monitoring indicate actual or potential exceedance of the water quality criterion or the Waste Load Allocation specified in the approved TMDL, the permittee shall submit to the DEQ - Blue Ridge Regional Office for review and approval a Pollutant Minimization Plan (PMP) designed to locate and reduce sources of PCBs in the collection system. A component of the plan may include an evaluation of the PCB congener distribution in the initial source intake water to determine the net contributions of PCBs introduced to the treatment works.

f. PCB monitoring shall proceed in accordance with the following schedule:

1.	Submit PCB sampling protocol	no later than June 10, 2011
2.	Complete and Submit PCB monitoring results to the DEQ - Blue Ridge Regional Office.	no later than September 10, 2012
3.	If required, Submit Pollutant Minimization Plan (PMP)	within 1 year of notification by DEQ

C. Whole Effluent Toxicity (WET) Limitation and Monitoring Requirements

1. a. The Whole Effluent Toxicity limitation of a maximum of 1.0 acute Toxicity Units (TU_a) in Part I.A. is a final limit for outfall 029 commencing from the effective date of the permit and lasting until the permit expiration date.

   b. The Whole Effluent Toxicity limitation of a maximum of 6.6 acute Toxicity Units (TU_a) in Part I.A. is a final limit for outfall 007 commencing from the effective date of the permit and lasting until the permit expiration date.

   c. The Whole Effluent Toxicity limitation of a maximum of 1.0 acute Toxicity Units (TU_a) in Part I.A. is a final limit for outfall 006 commencing from the effective date of the permit and lasting until the permit expiration date.

2. In accordance with the schedule in Part I.C.5 below, the permittee shall conduct quarterly acute toxicity tests for the term of the permit using 24-hour flow-proportioned composite samples of final effluent from Outfalls 007 and 029. The acute tests shall be 48-hour static tests using *Ceriodaphnia dubia*. Once a year, tests shall be conducted using both *Ceriodaphnia dubia* and *Pimephales promelas*. The test which results in the lowest LC_{50} or highest TU_a for a particular outfall shall be reported on the DMR for that outfall for the month in which the tests were performed.

   These acute tests shall be performed with a minimum of 5 dilutions, derived geometrically, for calculation of a valid LC_{50} and corresponding acute Toxic Units (TU_a). Express as TU_a (Acute Toxic Units) by dividing 100/ LC_{50} for DMR reporting. One (1) copy of a detailed report concerning the conduct of the test shall accompany the results.

   Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3. Tests in which control survival is less than 90% are not acceptable.

3. In accordance with the schedule in Part I.C.5 below, the permittee shall conduct quarterly acute toxicity tests for the term of the permit using 24-hour flow-proportioned composite samples of final effluent from Outfall 006. The acute multi-dilution NOAEC tests shall be 48-Hour Static Acute tests using *Pimephales promelas*.

   These acute tests are to be conducted using 5 geometric dilutions of effluent with a minimum of 4 replicates, with 5 organisms in each. The NOAEC (No Observed Adverse Effect Concentration), as determined by hypothesis testing, shall be reported on the DMR converted to TU_a (100/NOAEC). One (1) copy of a detailed report concerning the conduct

of the test shall accompany the results. The LC_{50} should also be determined and noted on the submitted report.

Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3. Tests in which control survival is less than 90% are not acceptable.

4. This permit may be modified or revoked and reissued to include pollutant specific limits in lieu of a WET limit should it be demonstrated that toxicity is due to specific parameters. Pollutant specific limits must control the toxicity of the effluent. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.

5. Reporting Schedule
   (1) The quarterly monitoring periods are January through March, April through June, July through September, and October through December. Test results must be reported on the DMR for that outfall for the month in which the tests were performed. The first quarterly monitoring period is July 1, 2010 through September 30, 2010.
   (2) The annual monitoring period is July through June. Test results must be reported on the DMR for that outfall for the month in which the tests were performed. The first annual monitoring period is July 1, 2010 through June 30, 2010.

D. Toxics Management Program

1. Biological Monitoring

   a. In accordance with the schedule in **Part I.D.2** below, the permittee shall conduct appropriate toxicity tests on 24-hour flow-proportioned composite samples of final effluent from Outfalls 005, 006, 007, 014, 026.

   Acute tests from Outfalls 005, 007, 014, and 026 shall be 48-hour static tests, conducted in such a manner and with a minimum of 5 dilutions, derived geometrically, for calculation of a valid LC_{50}. Acute tests from Outfall 006 shall be 48-hour static tests, conducted in such a manner and with a minimum of 5 geometric dilutions with a minimum of 4 replicates, with 5 organisms in each, for the determination of the NOAEC (No Observed Adverse Effect Concentration) by hypothesis testing.

   The chronic tests shall be static renewal tests. The chronic *Ceriodaphnia dubia* test to be used is the Chronic 3-Brood Static Renewal Survival and Reproduction Test. The chronic *Pimephales promelas* test to be used is the Chronic 7-day Static Renewal Survival and Growth Tests. These chronic tests shall be conducted in such a manner and at sufficient dilutions (minimum of five dilutions, derived geometrically) to determine the "No Observed Effect Concentration" (NOEC) for survival and reproduction or growth. Results which cannot be quantified (i.e. a "less than" NOEC value) are not acceptable, and a retest must be performed. Express the test NOEC as TU_C (Chronic Toxicity Units), by dividing 100/NOEC for DMR Reporting. Report the LC_{50} at 48 hours and the IC_{25} with the NOEC's in the test report.

The toxicity tests shall be performed as follows:

(1) Outfall 005, 014, 026 and 028: The permittee shall perform annual acute tests alternating between using *Pimephales promelas* and *Ceriodaphnia dubia.*

(2) Outfall 005 after oleum manufacture begins: Commencing within three months of the initial discharge of water from oleum manufacture, the permittee shall perform quarterly acute and chronic tests for a period of one year using *Pimephales promelas* and *Ceriodaphnia dubia.*

(3) Outfall 006: The permittee shall perform annual chronic tests using *Pimephales promelas.*

(4) Outfall 007: The permittee shall perform annual chronic tests using *C. dubia.*

(5) The permittee may provide additional samples to address data variability. These data shall be reported and may be included in the evaluation of effluent toxicity. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 163.3.

b. All applicable data will be evaluated for reasonable potential at the end of the permit term. Should evaluation of the data indicate a limit is needed, a WET limit and compliance schedule will be required.

c. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3.

d. Tests in which control survival is less than 90% are not acceptable.

2. Reporting Schedule

a. The permittee shall report the results on the DMR and supply one (1) copy of the toxicity test reports specified in this Toxics Management Program in accordance with the following schedule:

b. Reporting Schedule

(1) The quarterly monitoring periods are January through March, April through June, July through September, and October through December. Test results must be reported on the DMR for that outfall for the month in which the tests were performed. The first quarterly monitoring period is July 1, 2010 through September 30, 2010.

(2) The annual monitoring period is January through December. Test results must be reported on the DMR for that outfall for the month in which the tests were performed. The first annual monitoring period is January 1, 2010 through December 31, 2010.

E. GENERAL STORM WATER MANAGEMENT

1. General Storm Water Special Conditions

a. Sample Type.

For all storm water monitoring required in Part I A or other applicable sections of this permit, a minimum of one grab sample shall be taken. Unless otherwise specified, all such samples shall be collected from the discharge resulting from a storm event that occurs at least 72 hours from the previously measurable storm event (a "measurable storm event" is defined as a storm event that results in an actual discharge from the site). The required 72-hour storm event interval is waived where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the permittee shall submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable. If storm water discharges associated with industrial activity commingle with process or non-process water, then where practicable permittees must attempt to sample the storm water discharge before it mixes with the non-storm water discharge.

b. Recording of Results.

For each measurement or sample taken pursuant to the storm event monitoring requirements of this permit, the permittee shall record and report with the Discharge Monitoring Reports (DMRs) the following information:

(1) The date and duration (in hours) of the storm event(s) sampled;
(2) The rainfall total (in inches) of the storm event which generated the sampled discharge; and
(3) The duration between the storm event sampled and the end of the previous measurable storm event.

In addition, the permittee shall maintain a monthly log documenting the amount of rainfall received at this facility on a daily basis. A summarization of this information shall also be submitted with the DMRs.

c. Sampling Waiver.

When a permittee is unable to collect storm water samples required in Part I A or other applicable sections of this permit within a specified sampling period due to adverse climatic conditions, the permittee shall collect a substitute sample from a separate qualifying event in the next period and submit these data along with the data for the routine sample in that period. Adverse weather conditions that may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

d. Representative Discharges.

When a facility has two or more outfalls that discharge substantially identical effluents, based on similarities of the industrial activities, significant materials, size

of drainage areas, and storm water management practices occurring within the drainage areas of the outfalls, the permittee may test the effluent of one of such outfalls and report that the quantitative data also apply to the substantially identical outfall(s) provided that: (1) the representative outfall determination has been approved by DEQ prior to data submittal; and, (2) the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explains in detail why the outfalls are expected to discharge substantially identical effluents.

e. Quarterly Visual Examination of Storm Water Quality.

(1) The permittee must perform and document a quarterly visual examination of a storm water discharge associated with industrial activity from each outfall, except discharges exempted below. The examination(s) must be made at least once in each of the following three-month periods: January through March, April through June, July through September, and October through December. The visual examination must be made during daylight hours (e.g., normal working hours). If no storm event resulted in runoff from the facility during a monitoring quarter, the permittee is excused from visual monitoring for that quarter provided that documentation is included with the monitoring records indicating that no runoff occurred. The documentation must be signed and certified in accordance with **Part II K** of this permit.

(2) Visual examinations must be made of samples collected within the first 30 minutes (or as soon thereafter as practical, but not to exceed one hour) of when the runoff or snowmelt begins discharging from the facility. The examination must document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. The examination must be conducted in a well-lit area. No analytical tests are required to be performed on the samples. All samples (except snowmelt samples) must be collected from the discharge resulting from a storm event that results in an actual discharge from the site (defined as a "measurable storm event"), and that occurs at least 72 hours from the previously measurable storm event. The 72-hour storm interval is waived if the permittee is able to document that less than a 72-hour interval is representative for local storm events during the sampling period. Where practicable, the same individual should carry out the collection and examination of discharges for the entire permit term. If no qualifying storm event resulted in runoff during daylight hours from the facility during a monitoring quarter, the permittee is excused from visual monitoring for that quarter provided that documentation is included with the monitoring records indicating that no qualifying storm event occurred during daylight hours that resulted in storm water runoff during that quarter. The documentation must be signed and certified in accordance with **Part II K**.

(3) The visual examination reports must be maintained on-site with the Storm Water Pollution Prevention Plan (SWPPP). The report must include the outfall location, the examination date and time, examination personnel, the nature of the discharge (i.e., runoff or snow melt), visual quality of the storm water discharge (including observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm

water pollution), and probable sources of any observed storm water contamination.

(4) If the facility has two or more outfalls that discharge substantially identical effluents, based on similarities of the industrial activities, significant materials, size of drainage areas, and storm water management practices occurring within the drainage areas of the outfalls, the permittee may conduct visual monitoring on the effluent of just one of the outfalls and report that the observations also apply to the substantially identical outfall(s) provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explains in detail why the outfalls are expected to discharge substantially identical effluents. In addition, for each outfall that the permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area (i.e., low (under 40 percent), medium (40 to 65 percent), or high (above 65 percent)) shall be provided in the plan.

(5) When the permittee is unable to conduct the visual examination due to adverse climatic conditions, the permittee must document the reason for not performing the visual examination and retain this documentation onsite with the records of the visual examinations. Adverse weather conditions that may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

f. Allowable Non-Storm Water Discharges.

(1) The following non-storm water discharges are authorized by this permit provided the non-storm water component of the discharge is in compliance with f(2) below:

(a) Discharges from fire fighting activities;
(b) Fire hydrant flushings;
(c) Potable water including water line flushings;
(d) Uncontaminated air conditioning or compressor condensate;
(e) Irrigation drainage;
(f) Landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with manufacturer's instructions;
(g) Pavement wash waters where no detergents are used and no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed);
(h) Routine external building wash down which does not use detergents;
(i) Uncontaminated ground water or spring water;
(j) Foundation or footing drains where flows are not contaminated with process materials; and
(k) Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but NOT intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown or drains).

(2) Except for flows from fire fighting activities, the Storm Water Pollution Prevention Plan must include:

(a) Identification of each allowable non-storm water source;
(b) The location where the non-storm water is likely to be discharged; and

(c) Descriptions of appropriate BMPs for each source.

(3) If mist blown from cooling towers is included as one of the allowable non-storm water discharges from the facility, the permittee must specifically evaluate the discharge for the presence of chemicals used in the cooling tower. The evaluation shall be included in the SWPPP.

g. Releases of Hazardous Substances or Oil in Excess of Reportable Quantities.
The discharge of hazardous substances or oil in the storm water discharge(s) from the facility shall be prevented or minimized in accordance with the storm water pollution prevention plan for the facility. This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill. This permit does not relieve the permittee of the reporting requirements of 40 CFR 110, 40 CFR 117 and 40 CFR 302 or § 62.1-44.34:19 of the Code of Virginia. Where a release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR 110, 40 CFR 117 or 40 CFR 302 occurs during a 24-hour period:

(1) The permittee is required to notify the Department in accordance with the requirements of **Part II G** as soon as he or she has knowledge of the discharge;

(2) Where a release enters a municipal separate storm sewer system (MS4), the permittee shall also notify the owner or the MS4; and

(3) The storm water pollution prevention plan required by this permit must be reviewed to identify measures to prevent the reoccurrence of such releases and to respond to such releases, and the plan must be modified where appropriate.

h. Additional Requirements for Salt Storage.
Storage piles of salt or piles containing salt used for deicing or other commercial or industrial purposes shall be enclosed or covered to prevent exposure to precipitation. The permittee shall implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. All salt storage piles shall be located on an impervious surface. All runoff from the pile, and/or runoff that comes in contact with salt, including under drain systems, shall be collected and contained within a bermed basin lined with concrete or other impermeable materials., or within an underground storage tank(s), or within an above ground storage tank(s), or disposed of through a sanitary sewer (with the permission of the treatment facility). A combination of any or all of these methods may be used. In no case shall salt contaminated storm water be allowed to discharge directly to the ground or to state waters.

2. Storm Water Pollution Prevention Plan
Refer to **Part I F** for sector-specific storm water management requirements.
A storm water pollution prevention plan (SWPPP) for the facility was required to be developed and implemented under the previous permit. The existing storm water pollution prevention plan shall be reviewed and modified, as appropriate, to conform to the requirements of this section.

Permittees shall implement the provisions of the storm water pollution prevention plan as a condition of this permit.

The storm water pollution prevention plan requirements of this permit may be fulfilled, in part by incorporating by reference other plans or documents such as a spill prevention

control and countermeasure (SPCC) plan developed for the facility under Section 311 of the Clean Water Act, or best management practices (BMP) programs otherwise required for the facility, provided that the incorporated plan meets or exceeds the plan requirements of **Part I E 2 b** (Contents of the Plan). All plans incorporated by reference into the storm water pollution prevention plan become enforceable under this permit. If a plan incorporated by reference does not contain all of the required elements of the SWPPP of **Part I E 2 b** the permittee shall develop the missing SWPPP elements and include them in the required plan.

a. Deadlines for Plan Preparation and Compliance.

(1) The facility shall prepare and implement the plan as expeditiously as practicable, but not later than 270 days from the effective date of the permit.

(2) Measures That Require Construction. In cases where construction is necessary to implement measures required by the plan, the plan shall contain a schedule that provides compliance with the plan as expeditiously as practicable, but no later than 3 years after the effective date of this permit. Where a construction compliance schedule is included in the plan, the schedule shall include appropriate nonstructural and/or temporary controls to be implemented in the affected portion(s) of the facility prior to completion of the permanent control measure.

b. Contents of the Plan.

The contents of the SWPPP shall comply with the requirements listed below and those in **Part I F**. The plan shall include, at a minimum, the following items:

(1) Pollution Prevention Team. The plan shall identify the staff individuals by name or title that comprise the facility's storm water pollution prevention team. The pollution prevention team is responsible for assisting the facility or plant manager in developing, implementing, maintaining, revising, and ensuring compliance with the facility's SWPPP. Specific responsibilities of each staff individual on the team shall be identified and listed.

(2) Site Description. The plan shall include the following:

(a) Activities at the Facility. A description of the nature of the industrial activities at the facility.

(b) General Location Map. A general location map (e.g., USGS quadrangle or other map) with enough detail to identify the location of the facility and the receiving waters within one mile of the facility.

(c) Site Map. A site map identifying the following:

(i) The size of the property (in acres);

(ii) The location and extent of significant structures and impervious surfaces (roofs, paved areas and other impervious areas);

(iii) Locations of all storm water conveyances including ditches, pipes, swales, and inlets, and the directions of storm water flow (use arrows to show which ways storm water will flow);

(iv) Locations of all existing structural and source control BMPs;

(v) Locations of all surface water bodies, including wetlands;

(vi) Locations of potential pollutant sources identified under **Part I E 2 b (3)**;

(vii) Locations where significant spills or leaks identified under **Part I E 2 b (4)** have occurred;

(viii) Locations of the following activities where such activities are

exposed to precipitation: fueling stations; vehicle and equipment maintenance and/or cleaning areas; loading/unloading areas; locations used for the treatment, storage or disposal of wastes; liquid storage tanks; processing and storage areas; access roads, rail cars and tracks; transfer areas for substances in bulk; and machinery;

(ix) Locations of storm water outfalls and an approximate outline of the area draining to each outfall, and location of municipal storm sewer systems, if the storm water from the facility discharges to them;

(x) Location and description of all non-storm water discharges;

(xi) Location of any storage piles containing salt used for deicing or other commercial or industrial purposes; and

(xii) Locations and sources of runon to the site from adjacent property where the runon contains significant quantities of pollutants. The permittee shall include an evaluation with the SWPPP of how the quality of the storm water running onto the facility impacts the facility's storm water discharges.

(d) Receiving Waters and Wetlands. The name of all surface waters receiving discharges from the site, including intermittent streams, dry sloughs, and arroyos. Provide a description of wetland sites that may receive discharges from the facility. If the facility discharges through a municipal separate storm sewer system (MS4), identify the MS4 operator, and the receiving water to which the MS4 discharges.

(3) Summary of Potential Pollutant Sources. The plan shall identify each separate area at the facility where industrial materials or activities are exposed to storm water. Industrial materials or activities include, but are not limited to: material handling equipment or activities, industrial machinery, raw materials, industrial production and processes, intermediate products, byproducts, final products, and waste products. Material handling activities include, but are not limited to: the storage, loading and unloading, transportation, disposal, or conveyance of any raw material, intermediate product, final product or waste product. For each separate area identified, the description shall include:

(a) Activities in Area. A list of the activities (e.g., material storage, equipment fueling and cleaning, cutting steel beams); and

(b) Pollutants. A list of the associated pollutant(s) or pollutant constituents (e.g., crankcase oil-zinc, sulfuric acid, cleaning solvents, etc.) for each activity. The pollutant list shall include all significant materials handled, treated, stored or disposed that have been exposed to storm water in the three years prior to the date this SWPPP was prepared or amended. The list shall include any hazardous substances or oil at the facility.

(4) Spills and Leaks. The SWPPP shall clearly identify areas where potential spills and leaks that can contribute pollutants to storm water discharges can occur and their corresponding outfalls. The plan shall include a list of significant spills and leaks of toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a storm water conveyance during the three-year period prior to the date this SWPPP was prepared or amended. The list shall be updated if significant spills or leaks occur in exposed areas of the facility during the term of the permit. Significant spills and leaks include

releases of oil or hazardous substances in excess of reportable quantities, and may also include releases of oil or hazardous substances that are not in excess of reporting requirements.

(5) Sampling Data. The plan shall include a summary of existing storm water discharge sampling data taken at the facility. The summary shall include, at a minimum, any data collected during the previous permit term.

(6) Storm Water Controls.

(a) BMPs shall be implemented for all the areas identified in **Part I E 2 b (3)** (Summary of Potential Pollutant Sources) to prevent or control pollutants in storm water discharges from the facility. All reasonable steps shall be taken to control or address the quality of discharges from the site that may not originate at the facility. The SWPPP shall describe the type, location and implementation of all BMPs for each area where industrial materials or activities are exposed to storm water. Selection of BMPs shall take into consideration:

(i) That preventing storm water from coming into contact with polluting materials is generally more effective, and less costly, than trying to remove pollutants from storm water;

(ii) BMPs generally shall be used in combination with each other for most effective water quality protection;

(iii) Assessing the type and quantity of pollutants, including their potential to impact receiving water quality, is critical to designing effective control measures;

(iv) That minimizing impervious areas at the facility can reduce runoff and improve groundwater recharge and stream base flows in local streams (however, care must be taken to avoid ground water contamination);

(v) Flow attenuation by use of open vegetated swales and natural depressions can reduce in-stream impacts of erosive flows;

(vi) Conservation or restoration of riparian buffers will help protect streams from storm water runoff and improve water quality; and

(vii) Treatment interceptors (e.g., swirl separators and sand filters) may be appropriate in some instances to minimize the discharge of pollutants.

(b) Control Measures. The permittee shall implement the following types of BMPs to prevent and control pollutants in the storm water discharges from the facility~~.~~, unless it can be demonstrated and documented that such controls are not relevant to the discharges (e.g., there are no storage piles containing salt).

(i) Good Housekeeping. The permittee shall keep clean all exposed areas of the facility that are potential sources of pollutants to storm water discharges. Typical problem areas include areas around trash containers, storage areas, loading docks, and vehicle fueling and maintenance areas. The plan shall include a schedule for regular pickup and disposal of waste materials, along with routine inspections for leaks and conditions of drums, tanks and containers. The introduction of raw, final or waste materials to exposed areas of the facility shall be minimized to the maximum

extent practicable. The generation of dust, along with off-site vehicle tracking of raw, final or waste materials, or sediments, shall be minimized to the maximum extent practicable.

(ii) Eliminating and Minimizing Exposure. To the extent practicable, industrial materials and activities shall be located inside, or protected by a storm-resistant covering to prevent exposure to rain, snow, snowmelt, and runoff. Note: Eliminating exposure at all industrial areas may make the facility eligible for the "Conditional Exclusion for No Exposure" provision of 9 VAC 25-31-120 E, thereby eliminating the need to have a permit.

(iii) Preventive Maintenance. The permittee shall have a preventive maintenance program that includes **regular** inspection, testing, maintenance and repairing of all industrial equipment and systems to avoid breakdowns or failures that could result in leaks, spill and other releases. This program is in addition to the specific BMP maintenance required under **Part I E 2 c** (Maintenance of BMPs).

(iv) Spill Prevention and Response Procedures. The plan shall describe the procedures that will be followed for preventing and responding to spills and leaks.

(A) Preventive measures include barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling.

(B) Response procedures shall include notification of appropriate facility personnel, emergency agencies, and regulatory agencies, and procedures for stopping, containing and cleaning up spills. Measures for cleaning up hazardous material spills or leaks shall be consistent with applicable RCRA regulations at 40 CFR Part 264 and 40 CFR Part 265. Employees who may cause, detect or respond to a spill or leak shall be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals shall be a member of the Pollution Prevention Team.

(C) Contact information for individuals and agencies that must be notified in the event of a spill shall be included in the SWPPP, and in other locations where it will be readily available.

(v) Routine Facility Inspections. Facility personnel who possess the knowledge and skills to assess conditions and activities that could impact storm water quality at the facility, and who can also evaluate the effectiveness of BMPs shall regularly inspect all areas of the facility where industrial materials or activities are exposed to storm water. These inspections are in addition to, or as part of, the comprehensive site evaluation required under **Part I E 2 d**. At least one member of the Pollution Prevention Team shall participate in the routine facility inspections.

The inspection frequency shall be specified in the plan based upon a consideration of the level of industrial activity at the facility, but

shall be a minimum of quarterly unless more frequent intervals are specified elsewhere in the permit or written approval is received from the Department for less frequent intervals. At least once each calendar year, the routine facility inspection must be conducted during a period when a storm water discharge is occurring.
Any deficiencies in the implementation of the SWPPP that are found shall be corrected as soon as practicable, but not later than within 30 days of the inspection, unless permission for a later date is granted in writing by the Director. The results of the inspections shall be documented in the SWPPP, along with the date(s) and description(s) of any corrective actions that were taken in response to any deficiencies or opportunities for improvement that were identified.

(vi) Employee Training. The permittee shall implement a storm water employee training program for the facility. The SWPPP shall include a schedule for all types of necessary training, and shall document all training sessions and the employees who received the training. Training shall be provided for all employees who work in areas where industrial materials or activities are exposed to storm water, and for employees who are responsible for implementing activities identified in the SWPPP (e.g., inspectors, maintenance personnel, etc.). The training shall cover the components and goals of the SWPPP, and include such topics as spill response, good housekeeping, material management practices, BMP operation and maintenance, etc. The SWPPP shall include a summary of any training performed.

(vii) Sediment and Erosion Control. The plan shall identify areas at the facility that, due to topography, land disturbance (e.g., construction, landscaping, site grading), or other factors, have a potential for soil erosion. The permittee shall identify and implement structural, vegetative, and/or stabilization BMPs to prevent or control on-site and off-site erosion and sedimentation. Flow velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel if the flows would otherwise create erosive conditions.

(viii) Management of Runoff. The plan shall describe the storm water runoff management practices (i.e., permanent structural BMPs) for the facility. These types of BMPs are typically used to divert, infiltrate, reuse, or otherwise reduce pollutants in storm water discharges from the site.
Structural BMPs may require a separate permit under § 404 of the CWA and the Virginia Water Protection Permit Program Regulation (9 VAC 25-210) before installation begins.

c. Maintenance.
All BMPs identified in the SWPPP shall be maintained in effective operating condition. Storm water BMPs identified in the SWPPP shall be observed during active operation (i.e., during a storm water runoff event) to ensure that they are functioning correctly. Where discharge

locations are inaccessible, nearby downstream locations shall be observed. The observations shall be documented in the SWPPP.

The SWPPP shall include a description of procedures and a regular schedule for preventive maintenance of all BMPs, and shall include a description of the back-up practices that are in place should a runoff event occur while a BMP is off-line. The effectiveness of nonstructural BMPs shall also be maintained by appropriate means (e.g., spill response supplies available and personnel trained, etc.).

If site inspections required by **Part I E 2 b(6)(b)(v)** (Routine Facility Inspections) or **Part I E 2 d** (Comprehensive Site Compliance Evaluation) identify BMPs that are not operating effectively, repairs or maintenance shall be performed before the next anticipated storm event. If maintenance prior to the next anticipated storm event is not possible, maintenance shall be scheduled and accomplished as soon as practicable. In the interim, back-up measures shall be employed and documented in the SWPPP until repairs or maintenance is complete. Documentation shall be kept with the SWPPP of maintenance and repairs of BMPs, including the date(s) of regular maintenance, date(s) of discovery of areas in need of repair or replacement, and for repairs, date(s) that the BMP(s) returned to full function, and the justification for any extended maintenance or repair schedules.

d. Comprehensive Site Compliance Evaluation.

The permittee shall conduct comprehensive site compliance evaluations at least once a year. The evaluations shall be done by qualified personnel who possess the knowledge and skills to assess conditions and activities that could impact storm water quality at the facility, and who can also evaluate the effectiveness of BMPs. The personnel conducting the evaluations may be either facility employees or outside constituents hired by the facility.

(1) Scope of the Compliance Evaluation. Evaluations shall include all areas where industrial materials or activities are exposed to storm water, as identified in **Part I E 2 b(3)**. The personnel shall evaluate:

(a) Industrial materials, residue or trash that may have or could come into contact with storm water;

(b) Leaks or spills from industrial equipment, drums, barrels, tanks or other containers that have occurred within the past three years;

(c) Off-site tracking of industrial or waste materials or sediment where vehicles enter or exit the site;

(d) Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas;

(e) Evidence of, or the potential for, pollutants entering the drainage system;

(f) Evidence of pollutants discharging to surface waters at all facility outfalls, and the condition of and around the outfall,

including flow dissipation measures to prevent scouring;

(g) Review of training performed, inspections completed, maintenance performed, quarterly visual examinations, and effective operation of BMPs;

(h) Results of both visual and any analytical monitoring done during the past year shall be taken into consideration during the evaluation.

(2) Based on the results of the evaluation, the SWPPP shall be modified as necessary (e.g., show additional controls on the map required by **Part I E 2 b(2)(c)**; revise the description of controls required by **Part I E 2 b(6)** to include additional or modified BMPs designed to correct problems identified). Revisions to the SWPPP shall be completed within 30 days following the evaluation, unless permission for a later date is granted in writing by the Director. If existing BMPs need to be modified or if additional BMPs are necessary, implementation shall be completed before the next anticipated storm event, if practicable, but not more than 60 days after completion of the comprehensive site evaluation, unless permission for a later date is granted in writing by the Department;

(3) Compliance Evaluation Report. A report shall be written summarizing the scope of the evaluation, name(s) of personnel making the evaluation, the date of the evaluation, and all observations relating to the implementation of the SWPPP, including elements stipulated in **Part I E 2 d(1) (a) through (f)** above. Observations shall include such things as: the location(s) of discharges of pollutants from the site; location(s) of previously unidentified sources of pollutants; location(s) of BMPs that need to be maintained or repaired; location(s) of failed BMPs that need replacement; and location(s) where additional BMPs are needed. The report shall identify any incidents of noncompliance that were observed. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the SWPPP and this permit. The report shall be signed in accordance with **Part II K** and maintained with the SWPPP.

(4) Where compliance evaluation schedules overlap with routine inspections required under **Part I E 2 b(6)(b)(v)**, the annual compliance evaluation may be used as one of the routine inspections.

e. Signature and Plan Review.

(1) Signature/Location. The SWPPP shall be signed in accordance with **Part II K**, dated, and retained on-site at the facility covered by this permit in accordance with **Part II B 2**. All other changes to the SWPPP, and other permit compliance documentation, must be signed and dated by the person preparing the change or documentation.

(2) Availability. The permittee shall make the SWPPP, annual site

compliance evaluation report, and other information available to the Department upon request.

(3) Required Modifications. The Director may notify the permittee at any time that the SWPPP, BMPs, or other components of the facility's storm water program do not meet one or more of the requirements of this permit. The notification shall identify specific provisions of the permit that are not being met, and may include required modifications to the storm water program, additional monitoring requirements, and special reporting requirements. The permittee shall make any required changes to the SWPPP within 60 days of receipt of such notification, unless permission for a later date is granted in writing by the Director, and shall submit a written certification to the Director that the requested changes have been made.

f. Maintaining an Updated SWPPP.

(1) The permittee shall review and amend the SWPPP as appropriate whenever:

(a) There is construction or a change in design, operation, or maintenance at the facility that has a significant effect on the discharge, or the potential for the discharge, of pollutants from the facility;

(b) Routine inspections or compliance evaluations determine that there are deficiencies in the BMPs;

(c) Inspections by local, state, or federal officials determine that modifications to the SWPPP are necessary;

(d) There is a spill, leak or other release at the facility; or

(e) There is an unauthorized discharge from the facility.

(2) SWPPP modifications shall be made within 30 calendar days after discovery, observation or event requiring a SWPPP modification. Implementation of new or modified BMPs (distinct from regular preventive maintenance of existing BMPs described in **Part I E 2 b(6)(b)(iii)**) shall be initiated before the next storm event if possible, but no later than 60 days after discovery, or as otherwise provided or approved by the Director. The amount of time taken to modify a BMP or implement additional BMPs shall be documented in the SWPPP.

(3) If the SWPPP modification is based on a release or unauthorized discharge, include a description and date of the release, the circumstances leading to the release, actions taken in response to the release, and measures to prevent the recurrence of such releases. Unauthorized releases and discharges are subject to the reporting requirements of Part II G of this permit.

F. SITE SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

In addition to the requirements of **Part I E 2**, the SWPPP shall include, at a minimum, the following items:

1. SWPPP Requirements for Chemical and Allied Products Manufacturing
   a. Site Description.
      (1) Site Map. The site map shall identify where any of the following may be exposed to precipitation/surface runoff: processing and storage areas; access roads, rail cars and tracks; areas where substances are transferred in bulk; and operating machinery.
      (2) Summary of Potential Pollutant Sources. A description of the following sources and activities that have potential pollutants associated with them: loading, unloading and transfer of chemicals; outdoor storage of salt, pallets, coal, drums, containers, fuels, fueling stations; vehicle and equipment maintenance/cleaning areas; areas where the treatment, storage or disposal (on-site or off-site) of waste/wastewater occur; storage tanks and other containers; processing and storage areas; access roads, rail cars and tracks; areas where the transfer of substances in bulk occurs; and areas where machinery operates.
   b. Storm Water Controls.
      Good Housekeeping. The SWPPP shall include:
      (1) A schedule for regular pickup and disposal of garbage and waste materials, or a description of other appropriate measures used to reduce the potential for the discharge of storm water that has come into contact with garbage or waste materials;
      (2) Routine inspections of the condition of drums, tanks and containers for potential leaks.

2. SWPPP Requirements for Landfills, Land Application Sites and Open Dumps
   a. Site Description.
      (1) Site Map. The site map shall identify where any of the following may be exposed to precipitation/surface runoff: active and closed landfill cells or trenches; active and closed land application areas; locations where open dumping is occurring or has occurred; locations of any known leachate springs or other areas where uncontrolled leachate may commingle with runoff; and leachate collection and handling systems.
      (2) Summary of Potential Pollutant Sources. The SWPPP shall also include a description of potential pollutant sources associated with any of the following: fertilizer, herbicide and pesticide application; earth/soil moving; waste hauling and loading/unloading; outdoor storage of significant materials including daily, interim and final cover material stockpiles as well as temporary waste storage areas; exposure of active and inactive landfill and land application areas; uncontrolled leachate flows; and failure or leaks from leachate collection and treatment systems.
   b. Storm Water Controls.
      (1) Preventive Maintenance Program. As part of the preventive maintenance program, the permittee shall maintain: all containers used for outdoor chemical/significant materials storage to prevent leaking; all elements of

leachate collection and treatment systems to prevent commingling of leachate with storm water; and the integrity and effectiveness of any intermediate or final cover (including making repairs to the cover as necessary to minimize the effects of settlement, sinking, and erosion).

(2) Good Housekeeping Measures. As part of the good housekeeping program, the permittee shall consider providing protected storage areas for pesticides, herbicides, fertilizer and other significant materials.

(3) Routine Facility Inspections.

(a) Inspections of Active Sites. Operating landfills, open dumps, and land application sites shall be inspected at least once every seven days. Qualified personnel shall inspect areas of landfills that have not yet been finally stabilized, active land application areas, areas used for storage of materials/wastes that are exposed to precipitation, stabilization and structural control measures, leachate collection and treatment systems, and locations where equipment and waste trucks enter and exit the site. Erosion and sediment control measures shall be observed to ensure they are operating correctly. For stabilized sites and areas where land application has been completed, or where the climate is seasonally arid (annual rainfall averages from 0 to 10 inches) or semi-arid (annual rainfall averages from 10 to 20 inches), inspections shall be conducted at least once every month.

(b) Inspections of Inactive Sites. Inactive landfills, open dumps, and land application sites shall be inspected at least quarterly. Qualified personnel shall inspect landfill (or open dump) stabilization and structural erosion control measures and leachate collection and treatment systems, and all closed land application areas.

(4) Recordkeeping and Internal Reporting Procedures. Landfill and open dump owners shall provide for a tracking system for the types of wastes disposed of in each cell or trench of a landfill or open dump. Land application site owners shall track the types and quantities of wastes applied in specific areas.

(5) Sediment and Erosion Control Plan. Landfill and open dump owners shall provide for temporary stabilization of materials stockpiled for daily, intermediate, and final cover. Stabilization practices to consider include, but are not limited to, temporary seeding, mulching, and placing geotextiles on the inactive portions of the stockpiles. Landfill and open dump owners shall provide for temporary stabilization of inactive areas of the landfill or open dump which have an intermediate cover but no final cover. Landfill and open dump owners shall provide for temporary stabilization of any landfill or open dumping areas which have received a final cover until vegetation has established itself. Land application site owners shall also stabilize areas where waste application has been completed until vegetation has been established.

(6) Comprehensive Site Compliance Evaluation. Areas contributing to a storm water discharge associated with industrial activities at landfills, open dumps and land application sites shall be evaluated for evidence of, or the potential for, pollutants entering the drainage system.

3. SWPPP Requirements for Steam Electric Power Generating Facilities, Including Coal Handling Areas

a. Site Description.

Site Map. The site map shall identify the locations of any of the following activities or sources that may be exposed to precipitation/surface runoff: storage tanks, scrap yards, general refuse areas; short and long term storage of general materials (including, but not limited to: supplies, construction materials, plant equipment, oils, fuels, used and unused solvents, cleaning materials, paint, water treatment chemicals, fertilizer, and pesticides); landfills; construction sites; and stock pile areas (such as coal or limestone piles).

b. Storm Water Controls.

(1) Good Housekeeping Measures.

(a) Fugitive Dust Emissions. The permittee shall describe and implement measures that prevent or minimize fugitive dust emissions from coal handling areas. The permittee shall consider establishing procedures to minimize off-site tracking of coal dust such as installing specially designed tires, or washing vehicles in a designated area before they leave the site, and controlling the wash water.

(b) Delivery Vehicles. The plan shall describe measures that prevent or minimize contamination of storm water runoff from delivery vehicles arriving on the plant site. At a minimum the permittee shall consider the following:

(i) Develop procedures for the inspection of delivery vehicles arriving on the plant site, and ensure overall integrity of the body or container; and

(ii) Develop procedures to deal with leakage/spillage from vehicles or containers.

(c) Fuel Oil Unloading Areas. The plan shall describe measures that prevent or minimize contamination of precipitation/surface runoff from fuel oil unloading areas. At a minimum the permittee shall consider using the following measures, or an equivalent:

(i) Use of containment curbs in unloading areas;

(ii) During deliveries, having station personnel familiar with spill prevention and response procedures present to ensure that any leaks/spills are immediately contained and cleaned up; and

(iii) Use of spill and overflow protection (e.g., drip pans, drip diapers, and/or other containment devices placed beneath fuel oil connectors to contain potential spillage during deliveries or from leaks at the connectors).

(d) Chemical Loading/Unloading Areas. The permittee shall describe and implement measures that prevent or minimize the contamination of precipitation/surface runoff from chemical loading/unloading areas. At a minimum the permittee shall consider using the following measures (or their equivalents):

(i) Use of containment curbs at chemical loading/unloading areas to contain spills;

(ii) During deliveries, having station personnel familiar with spill prevention and response procedures present to ensure that any leaks/spills are immediately contained and cleaned up; and

(iii) Covering chemical loading/unloading areas, and storing chemicals indoors.

(e) Miscellaneous Loading/Unloading Areas. The permittee shall describe and implement measures that prevent or minimize the contamination of storm water runoff from loading and unloading areas. The permittee shall consider the following, at a minimum (or their equivalents):
(i) covering the loading area;
(ii) grading, berming, or curbing around the loading area to divert run-on; or
(iii) locating the loading/unloading equipment and vehicles so that leaks are contained in existing containment and flow diversion systems.

(f) Liquid Storage Tanks. The permittee shall describe and implement measures that prevent or minimize contamination of storm water runoff from aboveground liquid storage tanks. At a minimum the permittee shall consider employing the following measures (or their equivalents):
(i) Use of protective guards around tanks;
(ii) Use of containment curbs;
(iii) Use of spill and overflow protection; and
(iv) Use of dry cleanup methods.

(g) Large Bulk Fuel Storage Tanks. The permittee shall describe and implement measures that prevent or minimize contamination of storm water runoff from large bulk fuel storage tanks. At a minimum the permittee shall consider employing containment berms (or its equivalent). The permittee shall also comply with applicable state and federal laws, including Spill Prevention Control and Countermeasures (SPCC).

(h) Spill Reduction Measures. The permittee shall describe and implement measures to reduce the potential for an oil/chemical spill, or reference the appropriate section of their SPCC plan. At a minimum the structural integrity of all aboveground tanks, pipelines, pumps and other related equipment shall be visually inspected on a weekly basis. All repairs deemed necessary based on the findings of the inspections shall be completed immediately to reduce the incidence of spills and leaks occurring from such faulty equipment.

(i) Oil bearing Equipment in Switchyards. The permittee shall describe and implement measures to prevent or minimize contamination of surface runoff from oil bearing equipment in switchyard areas. The permittee shall consider the use of level grades and gravel surfaces to retard flows and limit the spread of spills, and the collection of storm water runoff in perimeter ditches.

(j) Residue Hauling Vehicles. All residue hauling vehicles shall be inspected for proper covering over the load, adequate gate sealing and overall integrity of the container body. Vehicles without load coverings or adequate gate sealing, or with leaking containers or beds shall be repaired as soon as practicable.

(k) Ash Loading Areas. The permittee shall describe and implement procedures to reduce or control the tracking of ash/residue from ash

loading areas where practicable, clear the ash building floor and immediately adjacent roadways of spillage, debris and excess water before departure of each loaded vehicle.

(l) Areas Adjacent to Disposal Ponds or Landfills. The permittee shall describe and implement measures that prevent or minimize contamination of storm water runoff from areas adjacent to disposal ponds or landfills. The permittee shall develop procedures to:

(i) Reduce ash residue which may be tracked on to access roads traveled by residue trucks or residue handling vehicles; and

(ii) Reduce ash residue on exit roads leading into and out of residue handling areas.

(m) Landfills, Scrapyards, Surface Impoundments, Open Dumps, General Refuse Sites. The plan shall address and include appropriate BMPs for landfills, scrapyards, surface impoundments, open dumps and general refuse sites.

(n) Vehicle Maintenance Activities. For vehicle maintenance activities performed on the plant site, the permittee shall use the applicable BMPs outlined in Sector P (Land Transportation and Warehousing).

(o) Material Storage Areas. The permittee shall describe and implement measures that prevent or minimize contamination of storm water runoff from material storage areas (including areas used for temporary storage of miscellaneous products, and construction materials stored in lay-down areas). The permittee shall consider the use of the following measures (or their equivalents): flat yard grades; runoff collection in graded swales or ditches; erosion protection measures at steep outfall sites (e.g., concrete chutes, riprap, stilling basins); covering lay-down areas; storing materials indoors; and covering materials temporarily with polyethylene, polyurethane, polypropylene, or hypalon. Storm water run-on may be minimized by constructing an enclosure or building a berm around the area.

(2) Comprehensive Site Compliance Evaluation. As part of the evaluation, qualified facility personnel shall inspect the following areas on a monthly basis: coal handling areas, loading/unloading areas, switchyards, fueling areas, bulk storage areas, ash handling areas, areas adjacent to disposal ponds and landfills, maintenance areas, liquid storage tanks, and long term and short term material storage areas.

4. SWPPP Requirements for Treatment Works.

a. Site Description.

(1) Site Map. The site map shall identify where any of the following may be exposed to precipitation/surface runoff: grit, screenings and other solids handling, storage or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station; and storage areas for process chemicals, petroleum products, solvents, fertilizers, herbicides and pesticides.

(2) Summary of Potential Pollutant Sources. The plan shall include a description of the potential pollutant sources from the following activities, as applicable: grit, screenings and other solids handling, storage or disposal areas; sludge

drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station; and access roads/rail lines.

b. Storm Water Controls.

(1) Best Management Practices (BMPs). In addition to the other BMPs considered, the following BMPs shall be considered: routing storm water to the treatment works; or covering exposed materials (i.e., from the following areas: grit, screenings and other solids handling, storage or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station).

(2) Inspections. The following areas shall be included in all inspections: access roads/rail lines, grit, screenings and other solids handling, storage or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station areas.

(3) Employee Training. Employee training shall, at a minimum, address the following areas when applicable to a facility: petroleum product management; process chemical management; spill prevention and control; fueling procedures; general good housekeeping practices; proper procedures for using fertilizers, herbicides and pesticides.

5. SWPPP Requirements for Transportation Facilities

a. Site Description.

Site Map. The site map shall identify the locations of any of the following activities and indicate whether the activities may be exposed to precipitation/surface runoff: fueling stations; vehicle/equipment maintenance or cleaning areas; storage areas for vehicle/equipment with actual or potential fluid leaks; loading/unloading areas; areas where treatment, storage or disposal of wastes occur; liquid storage tanks; processing areas; and storage areas.

b. Summary of Potential Pollutant Sources.

The plan shall describe and assess the potential for the following to contribute pollutants to storm water discharges: on-site waste storage or disposal; dirt/gravel parking areas for vehicles awaiting maintenance; and fueling areas.

c. Storm Water Controls.

(1) Good Housekeeping.

(a) Vehicle and Equipment Storage Areas. The storage of vehicles and equipment awaiting maintenance with actual or potential fluid leaks shall be confined to designated areas (delineated on the site map). The permittee shall consider the following measures (or their equivalents): the use of drip pans under vehicles and equipment; indoor storage of vehicles and equipment; installation of berms or dikes; use of absorbents; roofing or covering storage areas; and cleaning pavement surface to remove oil and grease.

(b) Fueling Areas. The permittee shall describe and implement measures that prevent or minimize contamination of the storm water runoff from fueling areas. The permittee shall consider the following measures (or their equivalents): covering the fueling area; using spill/overflow protection and cleanup equipment; minimizing storm water run-on/runoff to the fueling area; using dry cleanup methods; and treating and/or recycling collected storm water runoff.

(c) Material Storage Areas. Storage vessels of all materials (e.g., for used oil/oil filters, spent solvents, paint wastes, hydraulic fluids) shall be maintained in good condition, so as to prevent contamination of storm water, and plainly labeled (e.g., "used oil," "spent solvents," etc.). The permittee shall consider the following measures (or their equivalents): indoor storage of the materials; installation of berms/dikes around the areas, minimizing runoff of storm water to the areas; using dry cleanup methods; and treating and/or recycling the collected storm water runoff.

(d) Vehicle and Equipment Cleaning Areas. The permittee shall describe and implement measures that prevent or minimize contamination of storm water runoff from all areas used for vehicle/equipment cleaning. The permittee shall consider the following measures (or their equivalents): performing all cleaning operations indoors; covering the cleaning operation; ensuring that all washwaters drain to a proper collection system (i.e., not the storm water drainage system unless VPDES permitted); and treating and/or recycling the collected storm water runoff.

(e) Vehicle and Equipment Maintenance Areas. The permittee shall describe and implement measures that prevent or minimize contamination of the storm water runoff from all areas used for vehicle/equipment maintenance. The permittee shall consider the following measures (or their equivalents): performing maintenance activities indoors; using drip pans; keeping an organized inventory of materials used in the shop; draining all parts of fluids prior to disposal; prohibiting wet clean up practices where the practices would result in the discharge of pollutants to storm water drainage systems; using dry cleanup methods; treating and/or recycling collected storm water runoff; and minimizing run-on/runoff of storm water to maintenance areas.

(f) Locomotive Sanding (Loading Sand for Traction) Areas. The plan shall describe measures that prevent or minimize contamination of the storm water runoff from areas used for locomotive sanding. The permittee shall consider the following measures (or their equivalents): covering sanding areas; minimizing storm water run-on/runoff; or appropriate sediment removal practices to minimize the off-site transport of sanding material by storm water.

(2) Routine Facility Inspections. The following areas/activities shall be included in all inspections: storage area for vehicles/equipment awaiting maintenance; fueling areas; indoor and outdoor vehicle/equipment maintenance areas; material storage areas; vehicle/equipment cleaning areas; and loading/unloading areas.

(3) Employee Training. Employee training shall take place, at a minimum, annually (once per calendar year). Employee training shall address the following, as applicable: used oil and spent solvent management; fueling procedures; general good housekeeping practices; proper painting procedures; and used battery management.

CONDITIONS APPLICABLE TO ALL VPDES PERMITS

A. Monitoring

1. Samples and measurements taken as required by this permit shall be representative of the monitored activity.

2. Monitoring shall be conducted according to procedures approved under Title 40 Code of Federal Regulations Part 136 or alternative methods approved by the U.S. Environmental Protection Agency, unless other procedures have been specified in this permit.

3. The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals that will insure accuracy of measurements.

B. Records

1. Records of monitoring information shall include:

   a. The date, exact place, and time of sampling or measurements;

   b. The individual(s) who performed the sampling or measurements;

   c. The date(s) and time(s) analyses were performed;

   d. The individual(s) who performed the analyses;

   e. The analytical techniques or methods used; and

   f. The results of such analyses.

2. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the permittee, or as requested by the Board.

C. Reporting Monitoring Results

1. The permittee shall submit the results of the monitoring required by this permit not later than the 10th day of the month after monitoring takes place, unless another reporting schedule is specified elsewhere in this permit. Monitoring results shall be submitted to:

   Virginia Department of Environmental Quality
   Blue Ridge Regional Office
   3019 Peters Creek Road
   Roanoke VA 24019-2738

2. Monitoring results shall be reported on a Discharge Monitoring Report (DMR) or on forms provided, approved or specified by the Department.

C. Reporting Monitoring Results (Continued)

3. If the permittee monitors any pollutant specifically addressed by this permit more frequently than required by this permit using test procedures approved under Title 40 of the Code of Federal Regulations Part 136 or using other test procedures approved by the U.S. Environmental Protection Agency or using procedures specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the Department.

4. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.

D. Duty to Provide Information

The permittee shall furnish to the Department, within a reasonable time, any information which the Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Board may require the permittee to furnish, upon request, such plans, specifications, and other pertinent information as may be necessary to determine the effect of the wastes from his discharge on the quality of state waters, or such other information as may be necessary to accomplish the purposes of the State Water Control Law. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

E. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

F. Unauthorized Discharges

Except in compliance with this permit, or another permit issued by the Board, it shall be unlawful for any person to:

1. Discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances; or

2. Otherwise alter the physical, chemical or biological properties of such state waters and make them detrimental to the public health, or to animal or aquatic life, or to the use of such waters for domestic or industrial consumption, or for recreation, or for other uses.

G. Reports of Unauthorized Discharges

Any permittee who discharges or causes or allows a discharge of sewage, industrial waste, other wastes or any noxious or deleterious substance into or upon state waters in violation of Part II F; or who discharges or causes or allows a discharge that may reasonably be expected to enter state waters in violation of Part II F, shall notify the Department of the discharge immediately upon discovery of the discharge, but in no case later than 24 hours after said discovery. A written report of the unauthorized discharge shall be submitted to the Department, within five days of discovery of the discharge. The written report shall contain:

G. Reports of Unauthorized Discharges (Continued)

1. A description of the nature and location of the discharge;
2. The cause of the discharge;
3. The date on which the discharge occurred;
4. The length of time that the discharge continued;
5. The volume of the discharge;
6. If the discharge is continuing, how long it is expected to continue;
7. If the discharge is continuing, what the expected total volume of the discharge will be; and
8. Any steps planned or taken to reduce, eliminate and prevent a recurrence of the present discharge or any future discharges not authorized by this permit.

Discharges reportable to the Department under the immediate reporting requirements of other regulations are exempted from this requirement.

H. Reports of Unusual or Extraordinary Discharges

If any unusual or extraordinary discharge including a bypass or upset should occur from a treatment works and the discharge enters or could be expected to enter state waters, the permittee shall promptly notify, in no case later than 24 hours, the Department by telephone after the discovery of the discharge. This notification shall provide all available details of the incident, including any adverse affects on aquatic life and the known number of fish killed. The permittee shall reduce the report to writing and shall submit it to the Department within five days of discovery of the discharge in accordance with Part II I 2. Unusual and extraordinary discharges include but are not limited to any discharge resulting from:

1. Unusual spillage of materials resulting directly or indirectly from processing operations;
2. Breakdown of processing or accessory equipment;
3. Failure or taking out of service some or all of the treatment works; and
4. Flooding or other acts of nature.

I. Reports of Noncompliance

The permittee shall report any noncompliance which may adversely affect state waters or may endanger public health.

1. An oral report shall be provided within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which shall be reported within 24 hours under this paragraph:

   a. Any unanticipated bypass; and
   b. Any upset which causes a discharge to surface waters.

2. A written report shall be submitted within 5 days and shall contain:

   a. A description of the noncompliance and its cause;
   b. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
   c. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

I. Reports of Noncompliance (Continued)

The Board may waive the written report on a case-by-case basis for reports of noncompliance under Part II I if the oral report has been received within 24 hours and no adverse impact on state waters has been reported.

3. The permittee shall report all instances of noncompliance not reported under Parts II I 1 or 2, in writing, at the time the next monitoring reports are submitted. The reports shall contain the information listed in Part II I 2.

NOTE: The immediate (within 24 hours) reports required in Parts II G, H and I may be made to the Department's Regional Office at (540) 562-6700 (voice) or (540) 562-6725 (fax). For reports outside normal working hours, leave a message and this shall fulfill the immediate reporting requirement. For emergencies, the Virginia Department of Emergency Services maintains a 24 hour telephone service at 1-800-468-8892.

J. Notice of Planned Changes

1. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

   a. The permittee plans alteration or addition to any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

      (1) After promulgation of standards of performance under Section 306 of Clean Water Act which are applicable to such source; or

      (2) After proposal of standards of performance in accordance with Section 306 of Clean Water Act which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal;

   b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations nor to notification requirements specified elsewhere in this permit; or

   c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

2. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

K. Signatory Requirements

1. Applications. All permit applications shall be signed as follows:

   a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

   b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

   c. For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a public agency includes: (i) The chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

2. Reports, etc. All reports required by permits, and other information requested by the Board shall be signed by a person described in Part II K 1, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Part II K 1;

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and

   c. The written authorization is submitted to the Department.

3. Changes to authorization. If an authorization under Part II K 2 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part II K 2 shall be submitted to the Department prior to or together with any reports, or information to be signed by an authorized representative.

K. Signatory Requirements (Continued)

4. Certification. Any person signing a document under Parts II K 1 or 2 shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

L. Duty to Comply

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the State Water Control Law and the Clean Water Act, except that noncompliance with certain provisions of this permit may constitute a violation of the State Water Control Law but not the Clean Water Act. Permit noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if this permit has not yet been modified to incorporate the requirement.

M. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit. All permittees with a currently effective permit shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Board. The Board shall not grant permission for applications to be submitted later than the expiration date of the existing permit.

N. Effect of a Permit

This permit does not convey any property rights in either real or personal property or any exclusive privileges, nor does it authorize any injury to private property or invasion of personal rights, or any infringement of federal, state or local law or regulations.

O. State Law

Nothing in this permit shall be construed to preclude the institution of any legal action under, or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any other state law or regulation or under authority preserved by Section 510 of the Clean Water Act. Except as provided in permit conditions on "bypassing" (Part II U), and "upset" (Part II V) nothing in this permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance.

P. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Sections 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law.

Q. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes effective plant performance, adequate funding, adequate staffing, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

R. Disposal of Solids or Sludges

Solids, sludges or other pollutants removed in the course of treatment or management of pollutants shall be disposed of in a manner so as to prevent any pollutant from such materials from entering state waters.

S. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

T. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

U. Bypass

1. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts II U 2 and U 3.

2. Notice
   a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, prior notice shall be submitted, if possible at least ten days before the date of the bypass.
   b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Part II I.

3. Prohibition of bypass.
   a. Bypass is prohibited, and the Board may take enforcement action against a permittee for bypass, unless:
      (1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

U. Bypass (Continued)

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The permittee submitted notices as required under Part II U 2.

b. The Board may approve an anticipated bypass, after considering its adverse effects, if the Board determines that it will meet the three conditions listed above in Part II U 3 a.

V. Upset

1. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of Part II V 2 are met. A determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is not a final administrative action subject to judicial review.

2. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An upset occurred and that the permittee can identify the cause(s) of the upset;

b. The permitted facility was at the time being properly operated;

c. The permittee submitted notice of the upset as required in Part II I; and

d. The permittee complied with any remedial measures required under Part II S.

3. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

W. Inspection and Entry

The permittee shall allow the Director, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act and the State Water Control Law, any substances or parameters at any location.

W. Inspection and Entry (Continued)

For purposes of this section, the time for inspection shall be deemed reasonable during regular business hours, and whenever the facility is discharging. Nothing contained herein shall make an inspection unreasonable during an emergency.

X. Permit Actions

Permits may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Y. Transfer of permits

1. Permits are not transferable to any person except after notice to the Department. Except as provided in Part II Y 2, a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued, or a minor modification made, to identify the new permittee and incorporate such other requirements as may be necessary under the State Water Control Law and the Clean Water Act.

2. As an alternative to transfers under Part II Y 1, this permit may be automatically transferred to a new permittee if:

   a. The current permittee notifies the Department at least 30 days in advance of the proposed transfer of the title to the facility or property;

   b. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and

   c. The Board does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Part II Y 2 b.

Z. Severability

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.